Oracle® GoldenGate Administering Oracle GoldenGate Monitor





Oracle GoldenGate Administering Oracle GoldenGate Monitor, 12c (12.2.1.2)

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Preface

This preface contains information about and conventions for Oracle GoldenGate Monitor Administrator's Guide.

Audience

This document is intended for system administrators or application developers who are configuring, and running Oracle GoldenGate Monitor. It is assumed that readers are familiar with Web and Java technologies and have a general understanding of Linux, UNIX, and Windows platforms. It also provides information for monitoring Oracle GoldenGate instances using Oracle Enterprise Manager.

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Related Documents

For more information, see the following documents in the Oracle GoldenGate Monitor documentation set:

- Using Oracle GoldenGate Monitor
- Installing and Configuring Oracle GoldenGate Monitor
- Upgrading to Oracle GoldenGate Monitor 12.2.1
- Installing, Configuring, and Upgrading Oracle GoldenGate Monitor Agent
- Release Notes for Oracle GoldenGate Monitor

Conventions

The following text conventions are used in this document:



Convention	Meaning
boldface Boldface type indicates graphical user interface elements asso with an action, or terms defined in text or the glossary.	
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.



1

Introduction to Oracle GoldenGate Monitoring

This chapter identifies the components that make up Oracle GoldenGate Monitor and explains their roles. It provides an overview of the monitoring process and how it discovers the targets that it monitors.

This chapter includes the following sections:

- Overview
- Oracle GoldenGate Monitor Architecture
- Understanding the Discovery Process

1.1 Overview

Oracle GoldenGate Monitor is a real-time, Web-based monitoring console that delivers an ata-glance, graphical view of all of the Oracle GoldenGate instances and their associated databases within your enterprise. Instantly, you can view statistics, targeted views, and alerts that will help you to monitor the performance of all of the objects in the Oracle GoldenGate configuration and detect problems, such as lag or abended processes, the moment that they occur. Oracle GoldenGate Monitor can send alert messages to its own console workspaces, as well as to e-mail, SNMP, and CLI clients.

Oracle GoldenGate instances can be configured for monitoring by a remote client. When monitoring is enabled, Extract, Replicat, and Manager processes supply periodic updates of monitoring points such as status, lag, and checkpoints. The Manager sends these monitoring points to the Java agent that communicates with the client.

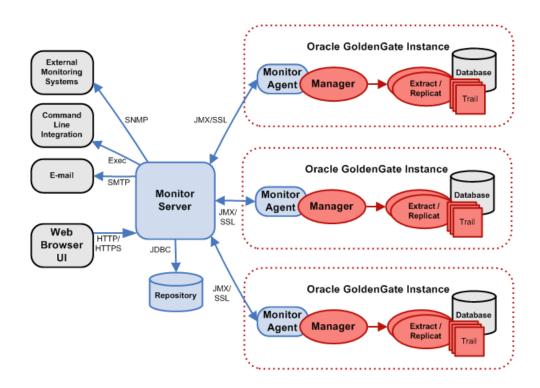


This documentation supports Oracle GoldenGate Monitor 12c (12.2.1).

Oracle GoldenGate releases 11.2.1 and later also support monitoring with Oracle Enterprise Manager. Refer to the *Oracle Enterprise Manager System Monitoring Plug-in Installation Guide for Oracle GoldenGate* for information on this option.

1.2 Oracle GoldenGate Monitor Architecture

Oracle GoldenGate Monitor uses a browser-based graphical user interface to monitor Oracle GoldenGate instances remotely. It includes the components shown in the diagram.



1.2.1 Oracle GoldenGate

An Oracle GoldenGate Monitor Server communicates with one or more Oracle GoldenGate instances through either Java Management Extensions (JMX) or the Secure Sockets Layer (SSL), but not both. The Manager process for each Oracle GoldenGate instance is associated with an Oracle GoldenGate Monitor Agent that supplies information about the instance to the Oracle GoldenGate Monitor Server.

1.2.2 Oracle GoldenGate Monitor Agent

An Oracle GoldenGate Monitor Agent should be used with each Oracle GoldenGate instance. It collects information about the instance and sends it to the Oracle GoldenGate Monitor Server.

The agent is a separate download and requires a separate installation process (described in About Oracle GoldenGate Monitor Agent). You must install Oracle GoldenGate Monitor Agent 12c (12.2.1) to ensure full functionality and take advantage of all command and control features (for example, edit, stop, and display logs).

1.2.3 Oracle GoldenGate Monitor Server

The Oracle GoldenGate Monitor Server coordinates the monitoring of multiple Oracle GoldenGate instances. The Oracle GoldenGate Monitor Server is a Java application that processes information from Oracle GoldenGate Monitor Agent's and communicates it to the web browser and manages user access roles, history, the display of information, and notifications triggered by events.

For more information about supported browsers, see Oracle Software Web Browser Support Policy.

Typically, Oracle GoldenGate Monitor works in all stabilized browsers.

1.2.4 Oracle GoldenGate Monitor Repository

The Oracle GoldenGate Monitor Server uses a database as a central repository to store information about users and groups, process status, events, and other information. Oracle and SQL Server repositories are supported. Details can be found online in the Certifications tab in My Oracle Support.

1.3 Understanding the Discovery Process

Oracle GoldenGate Monitor has preset definitions and rules that determine how it defines and automatically discovers solutions and databases.

1.3.1 Discovering Solutions

When you start your Oracle GoldenGate processes, the agent registers with the Oracle GoldenGate Monitor server. The server uses the information provided by the agent to look for solutions. Then when you log into the browser user interface, these solutions are available to display.

To be classified as a complete solution, there must be a continuous flow capturing and replicating changes from a source to a target database. The discovery process looks for complete solutions starting from a source database, creating a trail, and replicating the changes to a target database (a single end-to-end solution). Or it looks for processing that captures source database changes and delivers them to a target, and also captures changes from the target and delivers them to the source (a bi-directional solution).

1.3.2 Partial Solutions

Partial solutions—that is, solutions that are not registered as continuously linked from the source to the target database—will appear in the Oracle GoldenGate Monitor console Diagram View. They will be in Solution node but have a default name starting with "Partial Solution" instead of "Solution".

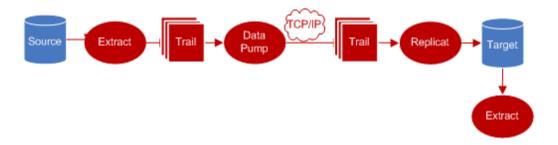
This diagram represents a partial solution with the Replicat configured but not started. Since the Replicat has never registered, the server does not see a continuous link to the target. Some pieces will show up in the tree view, but the configuration will not be included in the solutions list.



Registration of the Manager includes the names of its processes, so the Extract and Replicat names will be listed with the instance in the tree view whether they have registered or not. Linked databases and remote trails do not show up until the process registers, so the remote trail and the target database in the example will not be listed until the user starts the Replicat and it registers. This example will become a solution once the Replicat registers.



In this second example there are continuous links from the source to the target databases, but there is no link from the Extract that is attached to the target. Thus, this will show up as a partial solution.



1.3.3 Discovering Databases

Recognition of your source or target database by Oracle GoldenGate Monitor processing depends on the database type, where it is installed, and the process that is registering it. The solution discovery process compares the database instance, the Manager's port, and the host name to decide whether databases are the same.

The same database instance on the same host will be categorized as a separate database if it is registered by two different Managers.



2

Using Oracle GoldenGate Monitor Server

This chapter describes tasks performed when using Oracle GoldenGate Monitor Server, such as starting and stopping the Oracle GoldenGate Monitor Server, starting the user interface, changing passwords, and changing settings for the memory allotment or the timeout interval. This chapter includes the following sections:

- Starting and Stopping Oracle GoldenGate Monitor Server
- Starting Oracle GoldenGate Monitor Console
- Changing Oracle GoldenGate Monitor Server and Repository Passwords
- · Changing the Memory Allotment

2.1 Starting and Stopping Oracle GoldenGate Monitor Server

This section describes how to start and stop the Oracle GoldenGate Monitor Server.

2.1.1 Starting Oracle GoldenGate Monitor Server

Starting Oracle GoldenGate Monitor Server is a two or three step process

- 1. Start the WebLogic Administration Server.
- 2. If necessary, update the Oracle GoldenGate Monitor server credentials.
- 3. Start the WebLogic Managed Server

For complete details, see Starting Oracle GoldenGate Monitor Server.

2.1.2 Stopping the Oracle Golden Monitor Server

Follow these steps to stop the Oracle GoldenGate Monitor Server:

- You should close any running user interface sessions.
- Shut down the server by navigating to OGGMON_DOMAIN/bin (OGGMON_DOMAIN\bin on Windows) and enter the following command:

On Linux or UNIX:

\$./stopManagedWebLogic.sh

On Windows:

C:\ stopManagedWebLogic.cmd

 In some instances, you might need to shut down an administration server; for example, if you are deinstalling Oracle GoldenGate Monitor. To stop an administration server, see "To stop the Administration Server".

2.2 Starting Oracle GoldenGate Monitor Console

With the Oracle WebLogic Server administration server and the managed Oracle GoldenGate Monitor Server both started, you can start the Oracle GoldenGate Monitor Console. To do so, follow the instructions in "Start the Oracle GoldenGate Monitor Console" in *Installing and Configuring Oracle GoldenGate Monitor*.

Once you are logged into the application, the solution discovery process will discover configured solutions.

2.2.1 Running Multiple Sessions

You can run multiple sessions of Oracle GoldenGate Monitor user interface from the same computer and browser if you are using Internet Explorer. You can also run one Internet Explorer and one Mozilla Firefox session at the same time, but multiple Mozilla Firefox sessions on the same computer are not supported.

2.3 Changing Oracle GoldenGate Monitor Server and Repository Passwords

Utilities are provided to allow you to change Monitor Server and repository passwords when necessary. You can also change the memory allotment to better tune Oracle GoldenGate Monitor to your needs.

2.3.1 Changing Passwords

Oracle GoldenGate Monitor Server passwords are initially set based on what you enter when you install the server. The Oracle Wallet is created by the install program to store the passwords on all supported platforms.

Change passwords by using the WebLogic Scripting Tool (WLST) command updateCred(). WLST is a command-line scripting environment by which create, manage, and monitor WebLogic domains.

1. Navigate to the bin subdirectory in ORACLE_HOME/common and launch WLST.

On Linux or UNIX

```
$ ORACLE_HOME/common/bin./wlst.sh
```

On Windows:

```
C:\ ORACLE_HOME\common\bin./wlst.cmd
```

2. Connect to the server:

```
wls:/offline> connect('username','password','host:port')
```

- 3. Use updateCred() to change the password, as shown here:
 - To change the JMX password, enter this:

```
wls:/test_domain/serverConfig>updateCred(map="OGGMONITOR",key="
WEB.JMX.PASSWORD",user="username",password="new_jmx_password",desc="JMX
Password")
```



To change the keystore password, enter this:

```
wls:/test_domain/
serverConfig>updateCred(map="OGGMONITOR",key="MONITOR.KEYSTORE.PASSWORD",user="u
sername",password="new_keystore_password",desc="Keystore_Password")
```

To change the truststore password, enter this:

```
wls:/test_domain/
serverConfig>updateCred(map="OGGMONITOR",key="MONITOR.TRUSTSTORE.PASSWORD",user=
"username",password="new_truststore_password",desc="Keystore Password")
```

To change the SMTP password, enter this:

```
wls:/test_domain/
serverConfig>updateCred(map="OGGMONITOR",key="MONITOR.SMTP.PASSWORD",user="usern
ame",password="new_smtp_password",desc="SMTP Password")
```

2.4 Changing the Memory Allotment

The amount of RAM allocated to the Oracle GoldenGate Monitor server affects the number of Oracle GoldenGate instances and processes that can be monitored.



For more information on setting the memory requirements, see 'Tuning Java Virtual Machines (JVMs)" in *Tuning Performance of Oracle WebLogic Server*.

Oracle recommends the following memory settings:

Number of GoldenGate Processes	Minimum Heap (-Xms) Size	Maximum Heap (-Xmx) Size
100	32GB	32GB
300	64GB	64GB
1000	128GB	128GB

To change the Heap Sizes:

- 1. Open the setStartupEnv.sh file in a text editor: OGGMON_DOMAIN/bin/setStartupEnv.sh.
- 2. Locate the following line (should be line 317 if the file has not been modified since install):
 - # Startup parameters for STARTUP_GROUP MONITORSERVER-MANAGED-SERVERS
- 3. Locate the first entry of SERVER_MEM_ARGS_64HotSpot after the above line (should be line 352 if the file has not been modified since install).
- 4. Change Minimum and Maximum Heap accordingly, for example, 32GB:

```
SERVER_MEM_ARGS_64HotSpot="-Xms32g -Xmx32g"
```

5. Restart Monitor Server.



Caution:

There are multiple entries of <code>SERVER_MEM_ARGS_64HotSpot</code>. Ensure that the correct entry is identified exactly by the steps detailed in this topic to change the heap sizes. If not, adverse effects are bound to occur.

Note:

For Oracle GoldenGate Monitor Server to run on a Windows 32 bit system, the maximum memory allotment must be reduced to 800 MB and the MaxPermSize must be reduced to 340 MB. Reducing the memory allotment reduces the number of target systems that can be supported for monitoring. These installations will therefore not be able to monitor the number of target systems supported for other operating systems.



3

Using the Oracle Oracle GoldenGate Monitor Agent

This chapter explains how to use the Oracle GoldenGate Monitor Agent. It includes information such as how to change passwords and how to change memory allotment settings.

This chapter includes the following sections:

- Installing Oracle GoldenGate Monitor Agent
- Starting the Oracle GoldenGate Monitor Agent
- Updating Oracle GoldenGate Monitor Agent Passwords
- · Changing Oracle GoldenGate Monitor Agent Memory Allotment

3.1 Installing Oracle GoldenGate Monitor Agent

To install and configure Oracle GoldenGate Monitor Agent, use the procedures described in Installing and Configuring Oracle GoldenGate Monitor Agent. Oracle GoldenGate Monitor Agent *must* be installed on the *same* host as Oracle GoldenGate.

3.2 Starting the Oracle GoldenGate Monitor Agent

You need to start Oracle GoldenGate Monitor Agent whenever you start Oracle GoldenGate Monitor. To do so, go to Oracle GoldenGate GGSCI and execute the start jagent command:

GGSCI>START JAGENT



If processes were added or deleted, Oracle GoldenGate Monitor Agent will detect them without requiring restart.

3.3 Updating Oracle GoldenGate Monitor Agent Passwords

Oracle GoldenGate Monitor Agent passwords are stored in the Oracle Wallet for all supported platforms except IBM z/OS, where they are stored in the password.properties file (found in the *installation location*/cfq directory).

Use the pw_agent_util.bat and pw_agent_util.sh utilities from the command line to change agent passwords on all supported platforms.

To change Oracle GoldenGate Monitor Agent passwords:

Navigate to the installation directory.

On Linux or UNIX:

\$ cd ./installation_directory/

On Windows:

C:\ cd installation_directory

2. Using the appropriate runtime argument, run the appropriate pw_agent_util utility:



The password utility can be run only by the user who installed the Oracle GoldenGate instance.

On Linux or UNIX:

```
$ ./pw_agent_util.sh -[updateAgentJMX | updateServerJMX | updateKeystore |
updateTruststore]
```

On Windows:

```
C:\ pw_agent_util.bat -[updateAgentJMX | updateServerJMX | updateKeystore |
updateTruststore]
```

Where the pw agent util options are:

- -updateAgentJMX, which changes the agent's JMX password.
- -updateServerJMX, which changes Oracle GoldenGate Monitor Server's JMX password.
- -keystore, which adds the Java keystore password.
- truststore, which adds the Java truststore password.
- -updateKeystore, Which changes the Java keystore password.
- -updateTruststore, which changes the Java truststore password.

If the wallet is needed and it exists, the utility will prompt with the password to be modified. If the Oracle Wallet is needed and does not exist, the utility will return a message indicating that you will need to first run with the -create option and then the utility will stop. To create the wallet, use this command (using the same options described in this step):

On Linux or UNIX:

```
$ ./pw_agent_util.sh -create | -jagentonly
```

On Windows:

```
C:\ pw_agent_util.bat -create | -jagentonly
```

- 3. Enter and confirm the new password to implement the change. Press **Enter** without entering any data to cancel the request.
- 4. To activate the changes, navigate to the Oracle GoldenGate installation location and start GGSCI. Then do one of the following depending on your Oracle GoldenGate release:



 For Oracle GoldenGate release 11.1.1.1, stop and restart the Oracle GoldenGate Manager.

```
GGSCI> STOP MANAGER
GGSCI> START MANAGER
```

 For Oracle GoldenGate release 11.2.1 and later, stop and restart the Oracle GoldenGate Monitor Agent.

```
GGSCI> STOP JAGENT
GGSCI> START JAGENT
```

3.4 Changing Oracle GoldenGate Monitor Agent Memory Allotment

You can change the memory allotment for the standalone agent of Oracle GoldenGate release 11.2.1 and later by following these steps:

- 1. Navigate to the Oracle GoldenGate installation location.
- 2. Start GGSCI, and then edit the agent parameter file.

```
GGSCI> EDIT PARAMS JAGENT
```

3. The settings for the default memory allotment, -Xms, and the maximum memory allotment, -Xmx, are included in the start-up string for the agent. The following example sets the default to 64 MB and the maximum to 512 MB.

```
java -jar -Xms64m -Xmx512m dirjar/jagent.jar
```

- 4. Change the allotment numbers as needed, save the parameter file, and exit the editor.
- 5. Stop and restart the agent to implement the changes.

```
GGSCI> STOP JAGENT
GGSCI> START JAGENT
```



4

Understanding Instance Level Security

This chapter describes how to implement instance-level security in Oracle GoldenGate Monitor 12c (12.2.1). It contains the following sections:

- Overview
- Instance Access Rules
- Instance Access Behavior
- User Instance Matrix

4.1 Overview

In addition to the current functional level of security, instance level security is available in Oracle Golden Gate Monitor 12c (12.2.1) in order to restrict individual user access to different hosts/instances.

4.2 Instance Access Rules

The following instance access rules apply:

- A Super Administrator will always have access to all the Oracle GoldenGate Monitor Agent instances, and can always assign instances directly to users belongs to Operator/ Power Operator and Administrator roles.
- Administrators are not authorized to make any changes on the instances mapped to Super Administrators & other Administrators. Administrators can map and un-map the instances (that is, instances that are accessible by the current logged in Administrator) only for Operator and Power Operators.
- Administrators and Operators/Power Operators can have shared instance access; that is, multiple users can have access to common/same instances from the instance pool; for example, Pool [1,2,3,4,5] Ad1 -->[1,2,3], Ad2-->[3,4,5]
- A Super Administrator will always have the full/combined set of instances accessible to Operator/Power Operators, which are granted from different Administrators. A Super Administrator can override the instances assigned to Operator/Power Operators by an Administrator; for example: A user logs in as a Super Administrator and clicks on the user Opr1. The Super Administrator should see that only instances 1, 2, 3, 4,5 are enabled because the user Admin2 has access to instances 3,4,5 and had previously assigned 3,4,5 instance access to user Opr1.
- Administrators can reassign the instances deleted by the Super Administrator to Operators/Power Operators, provided the Administrator has access to those instances.
- If the Administrator gets deleted, the instances assigned to any Operator or Power Operators will remain as is. In the absence of a deleted Administrator, the instances owned by Operators or Power Operators will be administrated by the Super Administrator.



 A user can be assigned multiple roles. Oracle GoldenGate Monitor will consider the highest role for that user; for example, Admin1 can be both a Super Administrator and an Administrator.

Role Assignment Example

The following scenario shows how the preceding rules are applied during role/instance assignment. The roles used in this example are:

- SA: Super Admin
- JI: Jagent Instance
- Ad1, Ad2: Administrators
- Opr1, Opr2: Operators
- PowerOpr1,PowerOpr2: Power Operators.

The available Oracle GoldenGate Monitor Agent Instances are: {1, 2, 3, 4, 5}

These steps illustrate how roles are assigned specific instances:

- 1. SA: Has access to JI 1,2,3,4,5
- 2. SA: Assigns JI 1,2,3 to Ad1
- 3. SA: Assigns JI 3,4,5 to Ad2
- 4. Ad1: Assigns JI 1,2,3 to Opr1
- 5. Ad2: Assigns JI 3,4,5 to Opr1
- 6. Ad1: Assigns JI 1,2,3 to PowerOpr1
- Ad2: Assigns JI 3,4,5 to PowerOpr1

4.3 Instance Access Behavior

When the user tries to access the instance that are not assigned to that him or her, the user will see a message saying that he or she does not have access to the instance. The same behavior applies on the solutions/Views that are part of a specific instance.

4.4 User Instance Matrix

Logged In	EDIT USER Instance	EDIT USER Instance	EDIT USER Instance	EDIT USER Instance
User	Enabled/Disabled	Enabled/Disabled	Enabled/Disabled	Enabled/Disabled
Logged in as Super Administrator	Super Administrator Instance(s) Disabled	Administrator Instance(s) Enabled	Operator Instance(s) Enabled	Power Operator Instance(s) Enabled
Logged in as	Super Administrator	Administrator	Operator Instance(s)	Power Operator
Administrator	Instance(s) Disabled	Instance(s) Disabled	Enabled	Instance(s) Enabled





Users can create alerts for the instance objects that are not accessible by that user.



5

Commands and Parameters

This chapter describes the parameters set in the Oracle GoldenGate instance to enable monitoring, and the commands used to create and alter the Oracle GoldenGate Monitor data store and to start the Oracle GoldenGate Monitor Agent that handles monitoring data. This chapter includes the following sections:

- Parameters
- GGSCI Commands

5.1 Parameters

Oracle GoldenGate parameters are used to configure, run, and manage Oracle GoldenGate processes. The parameters included here apply to monitoring by Oracle GoldenGate Monitor Server or Oracle Enterprise Manager.

5.1.1 ENABLEMONITORAGENT

Valid for

GLOBALS

Use the ENABLEMONITORAGENT parameter to enable the Oracle GoldenGate Monitor Agent for Oracle GoldenGate release 11.1.1.1. For more information on this parameter, consult the Oracle GoldenGate Windows and UNIX Reference Guide for the 11.1.1.1 release.



ENABLEMONITORAGENT is deprecated for Oracle GoldenGate release 11.2.1 and later.

Syntax

ENABLEMONITORAGENT

5.1.2 ENABLEMONITORING

Valid for

GLOBALS

Use the ENABLEMONITORING parameter to enable monitoring for Oracle GoldenGate. Monitoring is enabled for Extract, Replicat, and Manager processes within the instance of Oracle GoldenGate to which it is applied.

ENABLEMONITORING activates collection of monitoring points providing status and other information on the Oracle GoldenGate processes to Oracle GoldenGate Monitor or Oracle Enterprise Manager.



 ${\tt ENABLEMONITORING} \ is \ a \ valid \ parameter \ for \ Oracle \ Golden Gate \ release \ 11.2.1 \\ and \ later.$

Syntax

ENABLEMONITORING

5.1.3 AUTOSTART JAGENT

Valid for

Manager

Use the JAGENT option of the AUTOSTART parameter to automatically start the Oracle GoldenGate Monitor Agent when Manager starts up.

You can use multiple AUTOSTART statements in the same parameter file.

Syntax

```
AUTOSTART {{EXTRACT | REPLICAT | ER} group_name | JAGENT}
```

Example

AUTOSTART JAGENT

5.2 GGSCI Commands

The Oracle GoldenGate Software Command Interface (GGSCI) is the command interface between users and Oracle GoldenGate functional components. For Oracle GoldenGate release 11.2.1 and later, commands are used to set up and control the interface between Oracle GoldenGate and monitoring by Oracle GoldenGate Monitor Server or Oracle Enterprise Manager.



Some commands or options in this section are marked as valid only for Oracle GoldenGate 11.2.1.0.7 and later; the others are valid for 11.2.1 and later

5.2.1 CREATE DATASTORE

Use CREATE DATASTORE to create an Oracle GoldenGate Monitor data store in the Oracle GoldenGate installation directory. The data store holds monitoring information

supplied by the Oracle GoldenGate Extract, Replicat, and Manager processes. This is a required step to use monitoring.

Syntax

```
CREATE DATASTORE [ MMAP | SHM [ID number] ]
```

MMAP indicates that the data store should use memory mapped files for interprocess communications. This is the default for Windows platforms. The MMAP option is valid with Oracle GoldenGate release 11.2.1.0.7 and later.



Do not use MMAP if you are running on a shared network file system such as Network File System (NFS), ASM Cluster File System (ACFS), or an Oracle Database File System (DBFS).

SHM indicates that the data store should use System V shared memory for interprocess communications. This is the default for non-Windows platforms. The optional ID specifies that number should be used as the System V shared memory key. If ID number is not entered, a default key will be assigned starting with 1000 and incrementing by 1 for each assignment. The SHM option is not available on Windows platforms and is valid only with Oracle GoldenGate release 11.2.1.0.7 and later.

Examples

```
CREATE DATASTORE
CREATE DATASTORE MMAP
CREATE DATASTORE SHM
CREATE DATASTORE SHM ID 1000
```

5.2.2 ALTER DATASTORE

Use ALTER DATASTORE to change the memory model used for interprocess communications by the Oracle GoldenGate Monitor data store. Before using this command, stop all Oracle GoldenGate processes, including Manager. This command is valid with Oracle GoldenGate release 11.2.1.0.7 and later.

Syntax

```
ALTER DATASTORE [ MMAP | SHM [ID number] ]
```

MMAP indicates that the data store should use memory mapped files for interprocess communications.

SHM indicates that the data store should use System V shared memory for interprocess communications. The optional ID specifies that number should be used as the System V shared memory key. If ID number is not entered, the key will be selected by GGSCI. This option is not available on Windows platforms.



Examples

ALTER DATASTORE MMAP
ALTER DATASTORE SHM
ALTER DATASTORE SHM ID 1000

5.2.3 DELETE DATASTORE

Use the DELETE DATASTORE command to remove the Oracle GoldenGate Monitor data store from the Oracle GoldenGate installation directory. Before using this command, stop all Oracle GoldenGate processes, including Manager. This command is valid with Oracle GoldenGate release 11.2.1.0.7 and later.

Syntax

DELETE DATASTORE [!]

! (exclamation point character) bypasses the prompt that confirms the intent to remove the data store.

Examples

DELETE DATASTORE !

5.2.4 INFO DATASTORE

Use the INFO DATASTORE command to display information about the memory model that is being used for interprocess communications by the Oracle GoldenGate Monitor data store. This command is valid with Oracle GoldenGate release 11.2.1.0.7 and later.

Syntax

INFO DATASTORE

5.2.5 REPAIR DATASTORE

Use the REPAIR DATASTORE command to repair the data store for the Oracle GoldenGate installation. It checks that all Extract and Replicat processes are registered and attempts to resolve any internal consistency errors. Use REPAIR DATASTORE to apply required updates when upgrading from a previous version of the data store.

Before using this command, stop all Oracle GoldenGate process, including Manager.

Syntax

REPAIR DATASTORE

5.2.6 INFO JAGENT

Use INFO JAGENT to display whether or not the Jagent is running.

Syntax

INFO JAGENT



Example

The INFO request will respond that the Oracle GoldenGate Monitor Agent is running or is down.

INFO JAGENT

JAgent is DOWN!

5.2.7 START JAGENT

Use START JAGENT to start the agent process. To confirm that it has started, use the INFO JAGENT or STATUS JAGENT command.



You do not need to restart an agent process to detect added or deleted processes.

Syntax

START JAGENT

Example

START JAGENT

GGCMD JAGENT started.

5.2.8 INFO JAGENT

Use STATUS JAGENT to determine whether or not the agent is running.

Syntax

STATUS JAGENT

Example

STATUS JAGENT

JAgent is running.

5.2.9 STOP JAGENT

Use stop jagent to stop the agent process. To confirm that it has stopped, use the INFO jagent or status jagent command.

Syntax

STOP JAGENT [!]

Where:



! (exclamation point) bypasses the prompt to confirm the request to stop the agent.



6

Properties

This chapter describes the property files delivered to the cfg subdirectory when Oracle GoldenGate Monitor and Oracle GoldenGate core are installed. These files contain settings that control the monitoring process. Some property values are preset based on the release of the software and some are set by the installer based on user entries. This chapter includes the following sections:

- Monitor Server Properties
- Agent Properties

6.1 Monitor Server Properties

The monitor.properties file describes the characteristics of Oracle GoldenGate Monitor processing. It includes properties to define the relationship with the JMX server and the timing for connection attempts. Many of these property values are initially set based on user entries during installation.



After you change a property value, you must restart the Monitor Server to activate it.

6.1.1 Restricted Properties

Certain Oracle GoldenGate Monitor properties can cause the system to malfunction if changed. These properties are designated as *restricted*. You should *not* change the preset values for restricted properties.

Restricted properties include:

```
monitor.jmx.internal.mbeans.enabled
monitor.supported.agent.metadata.versioneclipselink.target-database
eclipselink.weaving
eclipselink.ddl-generation
```

6.1.2 SSO Web Parameters

The SSO web parameters specifies the SSO (Single Sign On) log out URL. If Oracle GoldenGate Monitor is accessed in SSO environment, then monitor.ssoLogOutUrl is used to set the log out URL for the application. If the log out URL format for subsequent OAM (Oracle Access Manager) version changes, then this property has to be modified accordingly. However, server restart is not required in such an event.

The syntax is as follows:

monitor.ssoLogOutUrl=/oamsso/logout.html?end_url=/monitor

6.1.3 JMX Server Properties

These properties enable the JMX server, identify the user name, and register the name and port of the JMX server host.

6.1.3.1 monitor.jmx.server.enabled

Use monitor.jmx.server.enabled to enable or disable the JMX server. The JMX server must be enabled to allow the Jagent to register with the Oracle GoldenGate Monitor Server. The value is initially set to true to allow the agent to register.

Default

true

Syntax

monitor.jmx.server.enabled={true | false}

6.1.3.2 monitor.jmx.server.port

Use monitor.jmx.server.port to specify the JMX server port number. The value is initially set by the installer based on user entries. This must match the monitor.jmx.port entry in the agent's Config.properties file.

Syntax

monitor.jmx.server.port=port_number

Example

monitor.jmx.server.port=5502

6.1.3.3 monitor.jmx.server.host

Use monitor.jmx.server.host property to specify the computer name of the Oracle GoldenGate Monitor installation.

Set monitor.jmx.server.host property to the fully qualified host name of the server for the Oracle GoldenGate Monitor installation. This must match the monitor.host entry in the agent's Config.properties file. The value is initially set by the installer based on user entries.

Syntax

monitor.jmx.server.host=host_name

6.1.3.4 monitor.jmx.server.user

Use monitor.jmx.server.user to specify the user name to use when communicating with the JMX server. The value is initially set by the installer based on user entries.



This must match the monitor.jmx.username entry in the agent's Config.properties file.

Syntax

monitor.jmx.server.user=user_name

Example

monitor.jmx.server.user=oggmsjmxusr

6.1.4 Communication

You must select whether the communication will use SSL or not. If you use SSL, you need to identify the storage for the keys and certificates.

6.1.4.1 monitor.ssl

Use ${\tt monitor.ssl}$ to specify whether or not the communication from Oracle GoldenGate Monitor will use SSL.



The monitor.ssl setting for Oracle GoldenGate Monitor Server must match the jagent.ssl property settings in the Configuration.properties file of all agents that communicate with the server.

Default

false

Syntax

monitor.ssl=[true | false]

6.1.4.2 monitor.keystore.file

Use monitor.keystore.file to identify the file that stores the key pairs and certificates used for SSL authentication.

Default

monitorKeyStore

Syntax

monitor.keystore.file=keystore_filename



6.1.4.3 monitor.truststore.file

Use monitor.truststore.file to store trusted certification authority (CA) certificates that verify the identity of other clients or servers.

Default

jagentKeyStore

Syntax

monitor.truststore.file=truststore_filename

6.1.5 Connection Properties

These properties define characteristics of the connections. They can be changed, but it is recommended that you first consult with Oracle Support. For more information go to http://support.oracle.com.

6.1.5.1 monitor.default_agent_connection.max_attempts

Use monitor.default_agent_connection.max_attempts to specify the number of unsuccessful connections before the process will stop attempting to connect. An entry of 0 or a negative number specifies no limit on the number of times the connection should be tried. The value is initially set to 10.

Syntax

monitor.default_agent_connection.max_attempts=number

Example

monitor.default_agent_connection.max_attempts=0

6.1.5.2 monitor.default_agent_connection.reconnect_interval

Use monitor.default_agent_connection.reconnect_interval to specify the number of seconds to wait after an existing connection is broken before an attempt is made to reconnect. The value is initially set to 5.

Syntax

 $\verb|monitor.default_agent_connection.reconnect_interval=|seconds||$

Example

monitor.default_agent_connection.reconnect_interval=5

6.1.5.3 monitor.default agent connection.interval

Use monitor.default_agent_connection.interval to specify the number of seconds to wait between each unsuccessful attempt to connect. The value is initially set to 30.



Syntax

monitor.default_agent_connection.interval=seconds

Example

monitor.default_agent_connection.interval=30

6.1.5.4 monitor.web.rendering_interval

The monitor.web.rendering_interval property is used for Interval Renderer in seconds. To disable interval renderer set to 0.

Default

15 seconds

Syntax

monitor.web.rendering_interval=no_of_seconds

6.1.5.5 eclipselink.ddl-generation

Use the eclipselink.ddl-generation property to create database objects on server re-start if the administrator wants to re-point the server install to a new database.

Syntax

eclipselink.ddl-generation=create-tables

6.1.5.6 eclipselink.target-database

Use the eclipselink.target-database property to provides pointer to eclipselink to use the appropriate dialect according to the target database,

Default

This property underlines the database that eclipselink will be talking to.

Syntax

eclipselink.target-

database=org.eclipse.persistence.platform.database.OraclePlatform. In case of SQL Server, the syntax is: eclipselink.target-

database=org.eclipse.persistence.platform.database.SQLServerPlatform.

6.1.5.7 eclipselink.weaving

The eclipselink.weaving property is used to set a mode for

Default

Static



Syntax

eclipselink.weaving=static

6.1.6 Configuration Management Properties

These properties set the timeout value and the threshold number of events to trigger processing.

6.1.6.1 monitor.cm.event.timeout

Use monitor.cm.event.timeout to specify the time in milliseconds for the solution discovery process to wait between inquiries for new agents registered with the Oracle GoldenGate Monitor Server. The solution discovery process starts if a new agent is found. The value is initially set to 2000 milliseconds.

Syntax

monitor.cm.event.timeout=milliseconds

6.1.6.2 monitor.cm.event.max.size

Use monitor.cm.event.max.size to specify the threshold number of events that triggers the solution discovery process not to wait monitor.cm.event.timeout seconds before processing the remaining events. The value is initially set to 1000 events.

Syntax

monitor.cm.event.max.size=number_events

6.1.6.3 monitor.events.dispatcher.threads size

Use monitor.events.dispatcher.threads_size to specify the number of threads that will be used by the events dispatcher process. The value is initially set to 30.

Syntax

monitor.events.dispatcher.threads_size=number

Example

monitor.events.dispatcher.threads_size=30

6.1.6.4 monitor.max.mpevent.before.refresh

Use monitor.max.mpevent.before.refresh to modify the refresh rates in the User Interface.monitor.max.mpevent.before.refresh=default means no lag in refresh rate. The value indicates number of events must be reached before User Interface can refresh.

Syntax

monitor.max.mpevent.before.refresh=number_of_events





This property is applicable in Oracle GoldenGate Monitor 12.2.1.2.181115+ bundle patch only.

Note:

To monitor 300 processes, Oracle recommends this value to be 100.

6.1.6.5 monitor.refresh.landing.page

Use monitor.refresh.landing.page to do an auto refresh based on seconds for the **Process Metrics** tab page of an Instance, and **Metrics** tab page of a process.

Syntax

monitor.refresh.landing.page=default

monitor.refresh.landing.page=default means no auto refresh of **Process Metrics** and **Metrics** tabs.

Note:

This property is applicable in Oracle GoldenGate Monitor 12.2.1.2.181115+ bundle patch only.

6.1.6.6 monitor.disable.solution

Use monitor.disable.solution to turn on/off solution function. After setting this property to true, the solution function stops working and the **Solutions** sub menu disappears from the UI.

Syntax

monitor.disable.solution=true

6.1.6.7 monitor.landing.page.treeview

Use monitor.landing.page.treeview to configure the display layout of tree structure navigation in Oracle GoldenGate Monitor UI. The value default makes each tree node expanded. The value level-1 makes node expansion stop at first level, which is the **Hosts/Solutions/Views** icon.

Syntax

monitor.landing.page.treeview=default



6.1.6.8 monitor.debug.backendqueue.interval

Use monitor.debug.backendqueue.interval to specify the time interval that the debug thread will wait to get various metrics of monitor queues operation. Time unit is second. The default value zero disables the debug thread. A positive numeric value enables the debug thread and make it run periodically as the value defined. A negative numeric value also disables the debug thread. The monitored metric info will be logged in the monitor log.

Syntax

monitor.debug.backendqueue.interval=<time in seconds>

Default

0

6.2 Agent Properties

Some of the properties have default values that are used when a value for the property is not defined in the property file. Default values are not substituted for invalid entries. A message is written to the jagent.log and the ggserr.log when a default value is used.

The Config.properties file configures an Oracle GoldenGate Monitor Agent for communication with the Oracle GoldenGate Monitor Server or Oracle Enterprise Manager (Oracle GoldenGate release 11.2.1 or later). It contains preset properties delivered with the Oracle GoldenGate core installation. Values such as host server names, ports, and users must be reset to valid values for your system.



After you change a property value, you must restart the agent to activate it.

6.2.1 Agent Definition

You must set the type of agent that will be used to monitor the Oracle GoldenGate instance.

6.2.1.1 jmx.broker.port

Use the jmx.broker.port parameter for remote JMX server monitoring, and it is only applicable when jmx.enable.remote.monitoring is true. jAgent will internally use the broker port for remote JMX monitoring.

If the network is protected by firewall, then both jmx.broker.port and jagnet.jmx.port (in OGGMON mode) or jagent.rmi.port (in OEM mode) must be allowed through firewall. It can take any valid open port value. If the value of property jmx.enable.remote.monitoring is true and jmx.broker.port is not provided or its



value is given as default then it takes jagent.jmx.port (in OGGMON mode) or jagent.rmi.port (in OEM mode) as the jmx.broker.port.

Default

default

Syntax

jmx.broker.port=port_number

Example

jmx.broker.port=default
jmx.broker.port=12345

6.2.1.2 jmx.enable.remote.monitoring

The jmx.enable.remote.monitoring is used to enable remote monitoring for jAgent JMX server. If the value is false, then the remote connection to jAgent JMX server is not allowed.

Default

true

Syntax

jmx.enable.remote.monitoring=true

6.2.1.3 jagent.restful.ws.timeout

Use ${\tt jagent.restful.ws.timeout}$ to set the Jagent RESTful Web Service timeout in milliseconds.

Default

15000

Syntax

jagent.restful.ws.timeout=number

6.2.1.4 jagent.ggsci.timeout

Use ${\tt jagent.ggsci.timeout}$ to set the Jagent GGSCI timeout in seconds.

Default

30

Syntax

jagent.ggsci.timeout=number

6.2.1.5 continuous.alerts

When the condition of an alert is set for *process not running*, an alert is triggered when this process goes down. By default, no more alert is triggered as long as the process remains



down, even when the alert suppression time is reached. If the user wishes to continuously receive alerts at every suppression interval, set the continuous alerts parameter to true.

Syntax

continuous.alerts=true

6.2.1.6 jagent.large.deployment.threshold

The jagent.large.deployment.threshold value defines the threshold value of the Oracle GoldenGate processes the Agent is monitoring that is considered as large deployment. After the number of processes is equal or greater than the threshold, the jAgent automatically switches to a Large Deployment Mode.

In a **Large Deployment** mode, the jAgent creates a batch for all the monitoring objects rather than the previous behavior of creating only one monitoring object. This reduces the calls between the server and agent and increases the efficiency of the batch processing.

Syntax

jagent.large.deployment.threshold=Number_of_processes

Default

10

Example

jagent.large.deployment.threshold=5

6.2.1.7 agent.type.enabled

Use agent.type.enabled to specify whether monitoring will be done in Oracle GoldenGate Monitor or Oracle Enterprise Manager.

The Oracle GoldenGate Monitor Agent polls Manager at configurable intervals to collect monitoring points data.

- Setting agent.type.enabled to OGGMON causes the Oracle GoldenGate Monitor Agent to send the data to the Oracle GoldenGate Monitor Server.
- Setting agent.type.enabled to OEM causes the Oracle GoldenGate Monitor Agent to supply monitoring points data when polled by an Oracle Enterprise Manager agent or ODI.

This setting is also required when integrating with Oracle Data Integrator. If you are using both GoldenGate Monitor and Oracle Data Integration at the same time, you will need to set up two agents, one with agent.type.enabled set to Oracle GoldenGate Monitor and one set to OEM.

When agent.type.enabled is set to OEM, the Oracle Enterprise Manager agent will connect to the Oracle GoldenGate Monitor Agent through the Remote Method Invocation (RMI) connector, so you must enter the jagent.rmi.port.





This property is valid for the 11.2.1 release of Oracle GoldenGate and later.

Syntax

agent.type.enabled={OGGMON | OEM}

6.2.1.8 jagent.rmi.port

Use <code>jagent.rmi.port</code> to specify the port number for the RMI connector. This is the port that will be used by the Enterprise Manager agent when connecting to the Oracle GoldenGate Monitor Agent.

This property is required when agent.type.enabled is set to OEM.



This property is valid for the 11.2.1 release of Oracle GoldenGate and later.

Default

5559

Syntax

agent.rmi.port=port_number

6.2.2 Communication

You must select whether the communication will use Secure Sockets Layer (SSL) or not. If you use SSL, you need to identify the storage for the keys and certificates.



Oracle GoldenGate Monitor Agents running on IBM z/OS can only use SSL . Additionally, all agents communicating with a GoldenGate Monitor Server must all use the same connection protocol.



6.2.2.1 jagent.ssl

Use jagent.ssl to specify whether or not the communication from the agent will use SSL.



If the jagent.backward.compatility property is set to true, Oracle GoldenGate Monitor assumes SSL is not enabled and ignores the setting for jagent.ssl.

Note:

The jagent.ssl setting for all agents that communicate with Oracle GoldenGate Monitor Server must match the server's setting for the monitor.ssl property in the monitor.properties file.

Default

false

Syntax

jagent.ssl=[true | false]

6.2.2.2 jagent.keystore.file

Use <code>jgent.keystore.file</code> to identify the file that stores the key pairs and certificates used for SSL authentication.

Default

jagentKeyStore

Syntax

jagent.keystore.file=keystore_filename

6.2.2.3 jagent.truststore.file

Use jagent.truststore.file to store trusted certification authority (CA) certificates that verify the identity of other clients or servers.

Default

jagentKeyStore

Syntax

 ${\tt jagent.truststore.file=} truststore_file {\tt name}$



6.2.3 Monitoring Targets

You need to identify the names and ports for the computers where the Oracle GoldenGate Manager and Agent reside. You also set backward compatibility and define the agent credentials.

6.2.3.1 jagent.host

Use jagent.host to specify the host name of the computer where the Oracle GoldenGate Monitor Agent is running. This is the host name of the Oracle GoldenGate instance being monitored and should be the same name used in the RMTHOST parameter by any remote GoldenGate Extract processes that connect to this Oracle GoldenGate Monitor instance. This will ensure that Solution Discovery works properly.

This property is required. If a valid value is not entered, the Manager writes an error to ggserr.log during start up and the agent is not initialized successfully.

Syntax

jagent.host=ogg_host_name



If a remote trail is specified in the Extract parameter file using RMTTRAIL, then the host name specified for the RMTHOST parameter must match the value set for the Java jagent.host entry. When you have a remote Extract connecting to the local Oracle GoldenGate Monitor instance running the Oracle GoldenGate Monitor Agent, the fully qualified host name specified in the parameter file must be the same as the fully qualified name used for jagent.host.

6.2.3.2 jagent.jmx.port

Use jagent.jmx.port to specify the JMX port of the agent.

Default

5555

Syntax

jagent.jmx.port=port_number

6.2.3.3 mgr.host

Use mgr.host to specify the name or IP address of the computer where the Oracle GoldenGate Manager is running. Together, mgr.host and mgr.port identify the Oracle GoldenGate instance to the Oracle GoldenGate Monitor Agent.

If this property is not entered, the system will assume that the agent is local to the Oracle GoldenGate instance and determine the value by default.





This property is not used for 11.2.1 and earlier releases since the agent must be local to the Oracle GoldenGate instance.

Syntax

mgr.host=ogg_host_name

6.2.3.4 mgr.port

Whenever you change the mgr.port property, you should change the jagent.jmx.port property as well to register it with the Monitor server so that the correct results will be displayed.

Use mgr.port to specify the port of the Oracle GoldenGate Manager. If this property is not entered, the system will assume that the agent is local to the Oracle GoldenGate instance and determine the value by default.



This property is not used for 11.2.1 and earlier releases since the agent must be local to the Oracle GoldenGate instance.

Syntax

mgr.port=manager_port

6.2.3.5 monitor.host

Use monitor.host to specify the host computer name of the Oracle GoldenGate Monitor Server installation. Use the fully qualified host name. This must match the entry for monitor.jmx.server.host in the monitor.properties file.

This property is required. If a valid value is not entered, Manager writes an error to ggserr.log during start up and the agent is not initialized successfully.

Syntax

monitor.host=monitor_host_name

6.2.3.6 monitor.jmx.port

Use monitor.jmx.port to specify the JMX port of the Oracle GoldenGate Monitor Server installation. Initially set this to the value entered for the port on the JMX Server Configuration screen during the Oracle GoldenGate Monitor Server installation. This must match the monitor.jmx.server.port entry in the monitor.properties file.

Default

5502



Syntax

monitor.jmx.port=port_number

6.2.3.7 monitor.jmx.username

The monitor.jmx.username property must match the monitor.jmx.server.user entry in the monitor.properties file.

Use monitor.jmx.username to specify the user name for the JMX connection to the Oracle GoldenGate Monitor Server. Initially set this to the value entered for the user name on the JMX Server Configuration screen during the Oracle GoldenGate Monitor installation.

This property is required. If a valid value is not entered, Manager writes an error to ggserr.log during start up and the agent is not initialized successfully.

Syntax

monitor.jmx.username=user_name

6.2.3.8 jagent.username

Use <code>jagent.username</code> to specify the agent user name for the JMX connection to the Oracle GoldenGate Monitor Agent. When the agent registers, it passes this name to the Oracle GoldenGate Monitor Server.

This property is required. If a valid value is not entered, Manager writes an error to ggserr.log during start up and the agent is not initialized successfully.

Syntax

jagent.username=user_name

6.2.3.9 jagent.backward.compatibility

Set jagent.backward.compatibility to true to activate backward compatibility that allows monitoring of Oracle GoldenGate 11.1.1.1.1 instances. The value is initially set to false

Note:

This property applies only when agent.type.enabled=OGGMON. It is ignored when agent.type.enabled=OEM.

jagent.backward.compatibility is valid for all supported platforms except IBM z/OS.

If jagent.backward.compatibility is set to true, Oracle GoldenGate Monitor assumes SSL is not enabled and jagent.ssl is ignored.

Syntax

jagent.backward.compatibility={true | false}



6.2.4 Polling Properties

You can set the polling intervals. These polling interval properties default to the indicated default number of seconds if nothing is entered. An error message is generated if the entered number of seconds is negative or greater than 2147483647.

6.2.4.1 interval.quick

Use interval.quick to specify the polling interval used for monitoring points in the Quick Default Polling Group. The value is in seconds.

Default

30 seconds

Syntax

interval.quick=seconds

6.2.4.2 reg.retry.interval

Use reg.retry.interval to specify the interval to wait before retrying an initial agent registration when an exception occurs.

Default

10 seconds

Syntax

reg.retry.interval=seconds

6.2.4.3 instance.query.initial.interval

Use instance.query.initial.interval to specify the interval that Jagent will wait to register if Manager is the only running process. If there are still no other processes after this interval, the agent will proceed with the registration.

Default

5 seconds

Syntax

 $\verb|instance.query.initial.interval=|seconds||$

6.2.4.4 incremental.registration.quiet.interval

Use incremental.registration.quiet.interval to specify the interval that the agent will wait before registration of a new process.

Default

5 seconds



Syntax

incremental.registration.quiet.interval=seconds

6.2.4.5 maximum.message.retrieval

Use maximum.message.retrieval property to specify the maximum number of messages to retrieve from the core Oracle GoldenGate instance when the starts up.

Setting this number to zero or a negative number disables message retrieval function of the agent, which can be considered to increase performance if message monitoring is not needed.

Default

500 messages

Syntax

maximum.message.retrieval=number

6.2.4.6 message.polling.interval

Use message.polling.interval to set the interval for agent to poll ggserr.log for new messages.

Default

5 seconds

Syntax

message.polling.interval=seconds

6.2.4.7 status.polling.interval

Use status.polling.interval to set the interval for the agent to poll for the status of new and existing processes.

Default

5 seconds

Syntax

status.polling.interval=seconds

