

## Release Notes for Oracle GoldenGate for HP NonStop (Guardian)

This document contains the release notes for the 12c (12.3.0.1.4) release of Oracle GoldenGate for HP NonStop on the Guardian platform. You can find additional information about the parameters and options described in these release notes in the *Reference Guide for Oracle GoldenGate for HP NonStop (Guardian)*.

### New Release 12.3.0.1.0 — September 2018

This release contains several new features, some of which causes behavior changes and possibly require parameter modification. Therefore, we recommend you investigate the enhancements noted here as well as the *Reference Guide for Oracle GoldenGate for HP NonStop (Guardian)* and the *Fusion Middleware Administering Oracle GoldenGate for HP NonStop (Guardian)* for more details. If you have questions, you can also open an SR with Oracle support to resolve any issues that might affect your specific product usage.

### New Features 12.3.0.1.0

This section outlines the new features that are being introduced in this release and includes the following:

#### **Metadata in Trail**

Extract now writes metadata to trails, creating self-describing trails, removing the need to have SOURCEDEFS or use ASSUMETARGETDEFS.

#### **ANSI Name Support**

Added support for the mapping of OpenSys ANSI names to NSK format without using TARGETDEFS or mapping of data types on a remote platform extracting to NSK.

#### **Column Functions**

Two new column functions for before image values are now available.

#### **New GGSCI Command**

You can retrieve statistics by table/file to be shown at the terminal, like those sent to the report.

### **New output for Extract SOURCEISFILE**

New support for Extract to perform a SOURCEISFILE and send that data to RMTBATCH file.

### **New Extract Capture Feature for SQL/MP**

Extract can now derive all the tables in a catalog from a single entry for capture instead of listing each one by fully qualified name or series of wildcard entries.

## New Parameters

This section lists the parameters that have been added for this release.

- Extract parameter TablesInCatalog
- The GLOBALS parameter NOOBJECTDEFS can be used to turn off metadata in trails.

## Parameter Changes

This section explains the parameter changes that are included in this release.

### **SOURCEDEFS**

The option of OVERRIDE on the SOURCEDEFS parameter causes an Extract pump or Replicat to ignore metadata in trail.

The column function @datenow() now returns 6 bytes of fraction.

## Deprecated Parameters and Programs

This section lists the parameters and parameter options that are deprecated as of release 12c (12.3.0.1.0).

- The Reverse program is no longer supported and is End of life (EOL).
- LOGGER option OLDFORMAT is no longer supported.

## Installation and Upgrades

The installation file downloaded from Oracle is a standard ZIP file.

## Upgrade Process

The upgrade process for Oracle GoldenGate has not changed.

## Installation Instructions Changes

The installation instructions for release 12c (12.3.0.1) were changed to direct the user first to My Oracle Support (MOS), Patches and Upgrades to see if any patches are available for the requested release. If there are no available patches, the user is directed to <https://edelivery.oracle.com>.

## Corrected Problems and Enhancements

For questions on specific bugs or ticket numbers, consult Oracle Customer Support. SR is the Oracle Support SR number, and BugDB is the bug identification number. You can obtain Patches from the My Oracle Support site or you can contact support by opening an SR to obtain the current patch.

### Release 12.3.0.1.4 — August 2020

#### **Bug 30201964 NSK: Truncates from opensys have a TDR index**

Corrected handling of PurgeData/Truncate to and from OpenSys.

#### **Bug 31468930 NSK: Extract writes wrong coldef details for key cols for Enscribe group level keys**

Corrected the format of the metadata TDR records for Enscribe that have group level primary keys, causing the OpenSys Replicat to error with: Unexpected condition in `indexOutOfRangeException`.

#### **Bug 31486722 NSK: Replicat does not allocation file\_def keys array from sourcedefs**

Corrected a trap in Replicat and Extract pump when using a sourcedefs.

#### **31325052 NSK: Replicat doesn't process TDRs prior to begin time (TDR\_lookup returned NULL)**

Corrected a problem when Replicat is added with begin time and started with no data in the input trail.

#### **31344952 NSK: Replicat read can get a ERORR: Bad record (101).**

Corrected a problem that an Extract pump or Replicat can read a bad record when process starts with empty trail and contains a trail header (format 12.1).

#### **30985298 NSK: Extract needs to do recovery on trails in rollover recovery**

Corrected a problem when Extract would not complete prior trails during rollover recovery. Typically after `GGSCI > alter, rollover`.

#### **30115469 NSK: Extract pump ignored begin time.**

Corrected multiple problems with Extract begin time.

#### **Bug 31729898 - Colmap using function with no arguments causes extract and replicat to abend during refresh/fileaging.**

Corrected a problem when using column functions that contain no parameter arguments, which can cause a trap.

## Release 12.3.0.1.3 — March 2020

### **Bug 31002441 - NSK: Extract causes server collector error, did not recognize command (x00)**

Corrected Extract from writing a bad message at startup to Server Collector when Extract is writing to both an EXTTRAILS & RMTTRAILS.

### **Bug 31026669 - NSK:Fix mapping short records on opensys compressed format**

Corrected a problem in Replicat not updating fields when mapping Enscribe files for records generated from an OpenSys remote Extract that was missing columns for the target DDL.

### **Bug 30570379 - NSK: fname of exit\_params.source\_file is incorrectly set from record hdr fname.**

Corrected a bad fname sent to a user exit in the `source_file` of `exit_params`.

### **Bug 30350953 - NSK: Correct when Extract/Replicat test consistency check for syskey length.**

Changed Extract and Replicat not to abend when the Syskey length in the metadata doesn't match the the Syskey length in the trail record and column information is not required.

### **Bug 30468769 - NSK:Fix extract writing a bad TMF checkpoint**

Corrected Extract from corrupting the current checkpoint when restarting and using the parameter `AUDSERVPARAM NoAbendOnSecurityCheck` along with a fully qualified, non-wild carded filename that fails the security check.

### **Bug 30539452 - NSK: fix memory overwrite when processing data from emsclnt**

Corrected Server Collector from trapping after receiving a large message from EMSCNT.

### **Bug 30679780 - NSK: add intercept for FILE\_COMPLETE64\_**

Added logic in GGSLIB for `FILE_COMPLETE64_()`, `FILE_AWAITIO64_()`; which HP has changed `ZPUTDLL/XPUTDLL` to use.

### **Bug 30469048 - NSK:Output correct name in tdr when TargetName is used**

Corrected Extract to use the targetname in a metadata TDR record instead of the target when provided.

### **Bug 30236032 - NSK: DDLGEN traps using -d deffile option.**

Corrected `DDLGEN` from trapping when using a def file with Enscribe metadata.

## Release 12.3.0.1.2 — August 2019

### **Bug 30068937 NSK: DEFGEN NEEDS TO OUTPUT VERSION DETAILS BY DEFAULT**

DEFGEN will now output the DB and character set details by default without using the option format release.

**Bug 30067655 NSK: CHECK FOR EMPTY TDR RECORD WHEN USING SOURCEDEFS**

Corrected Extract/Replicat from trapping when using SOURCEDEFS and trail TDR metadata only contains the file index and name, not column details.

**Bug 30001024 NSK: DON'T OUTPUT FABRICATED TDR ON FILEOPS**

Corrected Extract not to output metadata TDR records for fileops.

**Bug 29785292 NSK: FIX MISIDENTIFICATION OF A WINDOWS UNC NAME AS AN NSK NAME**

Corrected Extract from processing Windows universal name as an NSK node name.

**Bug 29678828 NSK: FIX WILDCARD REPLACEMENT BUG AFTER CHANGES FOR ANSINAMES**

Corrected Extract/Replicat of parsing wildcarded map statements with multiple spaces after the key word TARGET.

**Bug 29605360 NSK: FIX FASTUNLOAD ON SHORT SQL ROWS**

Corrected a problem with Extract using SourceFile, FastUnload for a table that has had new columns added and existing rows were never updated, these columns were not populated in the output trail with the default value from the catalog.

**Bug 29956925 NSK: FIX AUDSERV TO POPULATE THE OLD 24 BYTE FILENAME FOR NON-WILDCARDED FILES.**

Corrected a problem in AUDSERV, which caused Extract to report an error: ARLIB error getting rec address 0,0 <file name> (Error -14 Data file not found...

When processing partition files and the Extract parameters used fully qualified names and not wildcarded entries.

**Bug 29927101 NSK: DONT RECOMPILE MAPS ON DDL OPERATIONS**

Corrected a problem, which can cause Extract to Abend with:

Warning: Source file <file name> has no columns defined

Error with default mapping. No matching fields found in source and target.

**Bug 29927063 NSK: EXTRACT WRITES DUPLICATE GGS TOKENS**

Corrected a problem, where Extract would write an increasingly larger and duplicated list of ggstokens processing audited Creates, Purges, and or Purgedatas. This could cause Replicat to abend with: ERROR 101 Unrecognized response from parsing (103), fatal.

**Bug 29539335 NSK: NEW TDR FOR EXISTING FILE/TABLE IS NOT CLEARING COLUMN DEFINITIONS**

Corrected a problem in Extract/Replicat while refreshing file/table attributes from new metadata record.

**Bug 29527761 NSK: EXTRACT\_REMOTE\_READBLOCK UNKNOWN**

Corrected a problem, which causes Extract to Abend with:

```
EXTRACT_remote_readblock Unknown
```

when writing to an OpenSys server collector using Format Release 9.5, after a rollover had been issued while on an empty output trail.

**Bug 29534397 NSK: FIX ERROR MESSAGE WHEN SOURCE FILE DOES NOT EXIST**

Corrected an error message from Extract: `sourceIsFile` from printing the target file name instead of the source.

**Bug 30141763 - NSK: TNS mode: @Range without column causes bad hash value**

Corrected a problem with `@Range()` for Enscribe files, when a column was not provided to the function.

**Bug 29678825 - NSK: fix add replicat with begin time on trails with TDRs**

Corrected a problem when Extract/Replicat scans for a specific begin time and the trail contains metadata.

## Release 12.3.0.1.1 — February 2019

**Bug 29006666 - NSK: FIX IDLE PUMP WRITING FILEHEADER**

Corrected a problem when an idle Extract begins to send data over IP and receives the following error:

```
OGG-00150 EXTRACT_remote_writeblock unexpected response 'OK' (4f4b) 0
```

**Bug 28869305 - NSK: SET CURRENT TRANS INFO FOR FILEHEADER ON FIRST RECORD**

Corrected the issue of fileheader fields not getting populated, when Extract writes to multiple output trails.

**Bug 28839073 - NSK: CORRECT SUBVOL NAME LENGTH FOR DEFAULTS WHEN RETRIEVING PARTITION INFO**

Added more error handling for retrieving partition information.

**Bug 28827079 - NSK: CORRECT THE UPDATE OF LAST IO TIME FOR EXCEPTION MAPS**

Corrected the update of the timestamp used to monitor the last IO to a target file to determine if it can be closed because it is no longer being used.

**Bug 28819063 - NSK: UPDATE THE FILEHEADER WHEN GRACEFULLY STOPPED**

Corrected the file header by updating last Commit Sequence Number (CSN) info and marking the trail complete on shutdown.

**Bug 28814222 - NSK: EXTRACT PUMP ABENDS WITH ERROR112 RECOVERY SCAN FAILED (5) FOR MISSING CSN WHEN NOT MOVING BEFORE**

Corrected CSN info when filtering records in an Extract pump.

**Bug 28788750/28686290 - NSK: FIX BIO\_OPEN\_ ERROR 13**

Changed Replicat to report the error and Abend, instead of just issuing a warning.

**Bug 28770211 - NSK: FIX FILEOP RECORDS IN 12.2 AND 12.3 FORMAT TRAILS**

Corrected a problem fileop/bulkio records, for partition specific operations on file partitions 8 and higher.

**Bug 28702895 - GGSCI NSK: FIX GGSCI TO BOUNDS CHECK EXTTRAIL MAX SIZE WHEN EXTENTS IS USED**

Added an error check on the size of the output trail based on extents.

**Bug 28666529 - NSK: REPLICAT CHECKPOINT LEFT IN ABENDED STATUS AFTER GRACEFUL STOP**

Corrected Replicat to commit any running trans at shutdown, caused by filtering out the last record of a transaction.

**Bug 28644981 - NSK: FIX PARAM\_ERR() CALL IN REPAIRPARTIALRECORD()**

Corrected an error message in recovery logic, which, if issued, would cause a trap.

**Bug 28545751- NSK: CLEANUP CACHED SQL STATEMENTS WHEN A TABLE IS AGED OFF**

Corrected a problem that would leave cached off sql statements in memory without removing them when a table was aged off.

**Bug 28487722 - NSK: ALLOW LARGE INFO MESSAGES FROM EMSCLNT**

Corrected a problem that would cause the Server Collector to trap when receiving a message larger than a 1000 bytes from the OpenSys EMSCLNT.

**Bug 29223233 - NSK: FIX EXCEPTIONSONLY MAPS**

Corrected an issue that caused Replicat to abend when using RepError Exceptions with the errors

Error in COLMAP clause. No columns defined for target file <filename>.

```
ERROR 101 Error in COLMAP clause from compile_map
```

**Bug - 28565509 NSK : FIX TRAP IN STATS REPORTING**

Corrected a problem that cause Extract and Replicat to trap when issuing the stats command from GGSCI when files had been aged off.

**Bug 28583504 - NSK : REPLICAT CHANGELABEL OP 66 ERROR -2**

Corrected Replicat to handle the mapping of a changelabel operation when the source node was not visible via expand.

**Bug 28958054 - NSK : ALLOW PASSTHRU TO FORMAT RELEASE 12.3 WITH NOOBJECTDEFS**

Allow pumping v9 thru 12.1 format to v12.3 format with Passthru as long as NOObjectDefs is specified for the Output trail.

**Bug 29128992 - NSK:FIX TRAP IN EXPDEF C WHEN EXPANDING A DEF**

Fix trap in Extract and Replicat when using EXPANDDDL for Enscribe files and the DDL record contains occurs at the end of the structure.

**28439302 - Bug 28439302 - NSK: MAPPING OF REDEFINES AT THE END OF A RECORD CAUSES A SHORT RECORD LENGTH**

Corrected writing a short record to an Enscribe file, when mapping contained a redefined column that was past the default columns.

**Bug 29060437 - NSK: EXTRACT WRITES BAD LASTXID IN FILEHEADER TO REMOTE FILE**

Corrected Extract from writing a bad token length for last CSN to the fileheader in a remote file on z/OS while marking the trail file complete.

**Bug 29266985 - NSK: CHANGE EXTRACT REQUEST FROM SERVER COLLECTOR FOR LAST CSN WHEN TARGET IS Z/OS**

Corrected a problem that would cause Extract to not output new data after trail recovery when the target was z/OS.

**Bug 29363371 - NSK: FIX SYSKEY IN METADATA FOR ENSCRIBE**

Corrected a test for mismatched Enscribe Syskey lengths.

**Bug 29305798 - NSK: TNS EXTRACT TRAPS WHEN USING ALTINPUT RANGE**

Corrected trap in TNS Extract when using ALTINPUT and RANGE.

**Bug 29309595 - NSK: EXTRACT TRAIL HAS WRONG TRANS IND WHEN OUTPUTTING LARGE RECORDS WITH FRAGMENTS.**

Corrected the transaction indicator on large records, which caused Replicat to hang.

**Bug 29310559 - REPSQLLOG PARAMETER IS NOT WORKING ON REPLICAT SIDE.**

Corrected a problem logging sql statements to the log instead of the report.

## Release 12.3.0.1.0 — September 2018

### **Bug 20230645 — NSK: ANSINAME SUPPORT**

The NSK extract and replicat support ANSI table names in trails from OpenSys.

### **Bug 21962720 — NSK ADD LOGIC TO WRITE METADATA**

Added logic to write metadata records DDR/TTR that are similar to OpenSys.

### **Bug 23311746 — NSK IMPLEMENT OPENSYS @BEFORE() FUNCTIONS**

Added new column functions @BEFORE() and @BEFOREAFTER().

### **Bug 23487639 — NSK:ADD GGSCI COMMAND CLEANUP NETWORKCHECKPOINTS**

Corrected this issue by adding CLEANUP NETWORKCHECKPOINTS to GGSCI.

### **Bug 24355355 — NSK:HANDLE BINARY 8 TYPE FROM DDL DICTIONARY**

Corrected this issue by handling the binary 8 type from the DDL dictionary.

### **Bug 25424692 — NSK: REMOVE REVERSE FROM DISTO, EOL**

The REVERSE program is no longer supported.

### **Bug 25823361 — NSK REPLICAT TRAPS ON SEND HANDLECOLLIONS FROM GGSCI**

Corrected a trap when no files or table have been resolved and replicat receives the HANDLECOLLIONS command from GGSCI.

### **Bug 25962002 — NSK:DEPRECATE OLD FORMAT TRAILS IN LOGGER**

The logger process now only writes new format trails, this is equivalent to version 9.5.

### **Bug 26122408 — NSK: CREATE FILE LIST FOR EXTRACT FROM CATALOG**

Added a new Extract parameter TablesInCatalog for Extract to determine all SQL/MP tables for capture from a single entry.

### **Bug 26150188 — NSK: CHANGE THE DEFAULT OS VERSION IN EMS MESSAGE**

Changed the hard coded value of G06 to represent the OS ID the code was compiled under for EMS output.

### **Bug 26402021 — EXTRACT WITH PURGEOLDEXTRACTS HITS FILENAME\_FINDSTART\_ ERROR 34**

Corrected this issue by calling FILENAME\_FINDFINISH\_() after testing for purgeoldextracts in both Extract and Replicat.

### **Bug 26793403 — DIRECT READ - EXTRACT PROCESS GETS ABENDED**

Corrected an error 1028 caused by a Direct read Extract incorrectly opening a SQL/MP table.

### **Bug 26822095 — NSK: ADD NEW DIRECT READ FILE TYPE TO EXTRACT**

Added a new Direct Read file type called `Advantage` has been added for Extract.

**Bug 27384040 — NSK: FIX GGSCI IGNORING ALTER EXTRACT RBA IF SEQNO NOT SPECIFIED**

Corrected the `Alter Extract` command in GGSCI from ignoring the RBA when no SEQNO was provided.

**Bug 27417762 — NSK: NEED TO ADD NEW OPENSYS SERVER COLLECTOR RESPONSE MESSAGE CODES AND FORMAT**

Added new OpenSys Server Collector response codes to Extract processing.

**Bug 27446044 — NSK:FORCE NEW TRAIL FORMAT**

Changed the logger process to write new trail format.

**Bug 27840161 — NSK:DEFGEN Change to Reject Unstructured Files**

Unstructured files are not supported.

**Bug 28011509 — Boundary Error 21 on Send to Audit Server**

Corrected an error when a large number of files specified for Capture didn't exist yet and caused a message from Extract to `Audserv` to have a bad length.

**Bug 28432889 — NSK: File Aging Old Source Causes Trap for Many to One Map**

Corrected file aging issue when Extract has many source files all mapped to the same target.

**Bug 9415757 — NSK RFE: WARN WHEN USING MAXTRANSOPS AND TMFEXCEPTIONS TOGETHER**

Added warning message if both `tmfexceptions` and `maxtransops` are in use that `maxtransops` is ignored .

**Bug 9416209 — NSK-4200-GG: RFE: ENHANCE SYNCFILE REPORT MANAGEMENT OPTIONS**

Added syncfile param `REPORTFILEEXTENTS`.

**Bug 9417335 — OS-5069-GG: INFO MARKER STOPS AFTER DISPLAYING 50 MARKERS. CUSTOMER WOULD LIKE**

The marker history has been increased from 50 to 500 records.

**Bug 9416492 — NSK-4235-GG: RFE: ALLOW SOURCEISFILE TO RMTBATCH**

Added logic to allow Extract to use `SourceIsFile` and output to `RMTBATCH` files.

**Bug 9421798 — NSK-4383-GG: PORT SEND ER COMMAND FROM OPENSYS TO NSK FOR STATS**

Added logic to Send Extract and Replicat a `STATS` request from GGSCI.

**Bug 9426907 — NSK-3338-GG: ADD ERROR CHECKING SO REPORT FILE AND PARAMETER FILE CANNOT BE IN Same Location**

Corrected this issue by adding an error check so that the report file and parameter files are not in the same location.

**Bug 9427394 — NSK-2895-GG: ALLOW DETECLOCKS TO BE SPECIFIED AT THE GLOBAL LEVEL**

Added `DETECLOCK`s as a global toggle.

**Bug 9427722 — NSK-2096-GG: BETTER ERROR MESSAGING FOR ENCRYPTION ERRORS**

Corrected the error message for encryption key problems and added encryption errors (blowfish, ggs) to `rmttask`.

**Bug 9430008 — NSK-3669-GG: RFE: ENHANCE DATENOW TO INCLUDE MICROSECONDS**

The column function `@DATENOW()` has been enhanced to include microseconds..

**Bug 9430158 — OS-10213-GG: RFE : CMDSEC DOES NOT DISTINGUISH BETWEEN SEND REPORT AND SEND STOP**

Corrected the issue by adding security check from the `CMDSEC` file to commands executed by `SEND` from `GGSCI`.

**Bug 9430167 — NSK-4079-GG: DISPLAY MISSING UPDATE COUNT**

Corrected the issue by adding Stats for `insertupdates(insertmissing)`, `insertdeletes`, and `updatedeletes`.

 **Note:**

For questions on specific bugs or ticket numbers, consult Oracle Customer Support. SR is the Oracle Support SR number, and BugDB is the bug identification number. You can obtain Patches from the My Oracle Support site or you can contact support by opening an SR to obtain the current patch.

## Known Issues

This chapter describes the known issues at the time of release.

## Metadata Compatibility

Metadata in trails for SQL/MP and Enscribe DDL without redefines is compatible with any 12.2 or higher version.

Metadata in trails for Enscribe DDL that contains Redefines, can only be sent to OpenSys targets of versions of 12.2.0.1.7 or higher and NSK targets of 12.3.0.1.0 or higher.

Metadata in trails that was fabricated for Enscribe files when DDL was not provided can cause problems for Replicat using `TARGETDEF` on a Map statement, please consult the manuals to correct this.

## Trail Version Compatibility

Oracle recommends that both the source and target version be of the same major release versions, but if this is not possible, the output data trails must be sent by Extract capture in the targets version formatting, using the appropriate release format `<version>` option with the `EXTTRAIL/RMTTRAIL` parameter.

In the case of Extract version 12.3 to a Oracle GoldenGate for HP NonStop version 11 target, Extract can receive the error `EXTRACT_remote_readblock File error File <file> already exists; specify PURGE or APPEND`. In this case if upgrading the target is not possible, release format 9.5 option on `RMTTRAIL` parameter.

## Open Issues

- Replicat abends with an error 10221 on a Create of an Enscribe file, if the item code 221 (Partition maximum extents array) was used when the number of partitions was set to 0 during your applications call to `FILE_CREATELIST()`, that was captured by Logger.
- Extract writes the wrong filename on `FileOp` records that the map statement is using the option of `TARGETNAME`.
- Replicat is currently unable to correctly process `OpenSys PKUpdate` records to a Relative Enscribe files using `USEALTKEY`.

## Notes

- Bad Records read in an Extract Pump/Replicat or Replicat receiving error 59.  
This issue can be cause by common and incorrect setups:
  1. A Logger process is doing 4K writes (default) and either an Extract pump/Replicat is using `FASTREADS`.
  2. An Extract is not doing `FASTIO` and either an Extract pump/Replicat is using `FASTREADS`.
  3. An Extract is sending to a `RMTTAIL` and the Server Collector is doing 4K writes (default) and Replicat is using `FASTREADS`.
- If you are using User Exits to do primary key updates, you must change the key length fields to a long instead of a short. This is due to the support for the larger records of DDL2.
- When capturing non audited change data using `LOGGER`, applications are required to open logged files with the correct elections setting for the file in question when opened. While `FILE_OPEN()` may allow 64bit primary key access on a `FORMAT 1` file, those updates will be capture as `FORMAT 2` and causes a miss-match with Oracle GoldenGate metadata. If column information is required for any reason, Maps, Filters, or `SQLExec`, an Extract pump or Replicat fails.

# Getting Help with Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Related Information

The Oracle GoldenGate Product Documentation Libraries are found at

<https://docs.oracle.com/en/middleware/goldengate/index.html>

For additional information on Oracle GoldenGate, refer to, <https://www.oracle.com/middleware/technologies/goldengate.html>

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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Oracle® Fusion Middleware Release Notes for Oracle GoldenGate for HP NonStop (Guardian), 12c (12.3.0.1.4)  
F20560-04

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