

Release Notes for Oracle GoldenGate for HP NonStop (Guardian)

This document contains the release notes for the 19c (19.1.0.0.x) 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)*. This product is for the support of Enscribe and SQL/MP, it does not support SQL/MX.

New Features - 19.1.0.0.0 - June 2021

This release contains several new features, some of which causes behavior changes and possibly require parameter modification depending on the version you are currently using. Therefore, Oracle recommends that 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 information. If you have questions, then you can also open a service request (SR) with [Oracle support](#) to resolve any issues that might affect your specific product usage.

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

New Parameters

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

Extract parameter `TransmemVols` to control the memory allocation for uncommitted transactions.

Replicat Map option `CREATEUSINGTARGETUSERID` to set ownership of files being created.

Function call `@GETTLFTOKEN()` to obtain a token from a Base24 TLF or PTLF file.

Added new options to the `@GETENV()` for obtaining the source or target file/table name from the record header.

Extract/Replicat Map option `TRACETLFTOKENS` for debugging `@GETTLFTOKEN()`.

Extract/Replicat parameter `SUPPRESSMISSINGMAPS` to hide warnings.

Replicat Map option `B24MULTINETREMOTEFLLAG` to create/update the Base24 remote flag multi-network token BK.

New User Exit function calls `GET_FILENAME_EXTERNAL` and `SET_TARGET_FILENAME_EXTERNAL` to obtain and set external format file names including ASCII name format. GGSCI command `GETMGRVERSION` to obtain version details of an Oracle GoldenGate target.

Added options `SOURCEFILENAME` and `SOURCEFILENAME` to `@GETENV()` for record filename. Added new parameter `SUPPRESSMISSINGMAPS` to suppress unmapped columns from the report file.

Parameter Changes

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

Starting HP NonStop 19.1.0.0.0 release, `NOABENDONSECURITYCHECK` is only effective on Wild carded entries. Fully qualified names, not passing security checks, will cause Extract to Abend.

MAP option `ALTNAME` is available in Replicat to specify an alternate name for a source file that may no longer exist.

Column function `@DATE()` function has new options to handle OpenSys 12 digit fractions and Time Zone.

`EXTTRAIL`, `RMTRAIL`, `EXTFILE`, and `RMTFILE` have a new option to set the encryption mode.

`ENCRYPTTRAIL` now has AES encryption methods.

Starting HP NonStop 19.1.0.0.7 release, `RMTHOST` has AES encryption methods over TCP/IP.

Deprecated Parameters and Programs

This section explains the deprecated parameters and programs in release 19c (19.1.0.0.0).

`PASSTHRU` is no longer supported.

`OBJECTDEFS/NOBJECTDEFS` is no longer supported.

For more information about the impact of these deprecated parameters, see [Metadata Requirement](#) under Known Issues.

Starting HP NonStop 19.1.0.0.7 release, the GGS trail encryption method has been deprecated.

Future for Oracle GoldenGate for HP NonStop Release 23.4.0.0.0:

TNS objects for Extract and Replicat are to be de-supported and deprecated in the future releases of Oracle GoldenGate starting in version 23.4. Native objects have been the preferred model for more than two decades. The only impact to clients are for those still using TNS mode user exits.

If you have coded your own user exits, then you will be required to recompile them in Native mode.

For those using the Oracle® GoldenGate Application Adapters for BASE24, native mode objects are provided as part of that download.

BlowFish for encryption over TCP/IP will be deprecated and removed. For NSK to NSK this can be replaced by using AES encryption. For NSK to OpenSys Classic, AES encryption is available, however for NSK to OpenSys MicroServices there is no method to encrypt over IP. You will instead need to use EncryptTrail.

Program Changes

LOGDUMP can only be used for interrogating TMF or Oracle GoldenGate trails which do not contain AES encrypted data.

LOGDUMPA can be used Oracle GoldenGate trail files of any kind, but must be used for trails that contain any flavor of AES encryption. This version cannot be used to interrogate TMF.

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

Oracle recommends to perform installs or upgrades of any Oracle GoldenGate version to the target system before the source. As a best practice before any install check 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. 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 19.1.0.0.7 — January 2024

Patch 36109767 - ORACLE GOLDENGATE NSK V19.1.0.0.7 ON HP NONSTOP

Bug 36179608 NSK: Extract does not write restart abend record to rmttrail after recovery.

Corrected Extract to properly output a restart abend record to RMTTRAILS after restarting after having abended during a prior execution.

Bug 36095998 NSK: Extract pump uses def instead of source metadata record when preceded by fileop.

Corrected metadata usage when a FileOp precedes the TDR and a DEF was incorrectly provided in an Extract pump.

Bug 36095696 NSK: Extract pump throws incorrect warning on MRKRGGG records captured from TMF.

Corrected Extract Pump from throwing a warning like: Warning: unable to use definition MARKER-REC, source trail contains metadata for file \NODE.\$VOL.SUBVOL.MRKRGGG.

Bug 35977170 NSK: change trail open for fileheader writes from syncdepth 0 to 1.

Changed Extract's opener for access to the output trails file header to use Sync-Depth 1. This was done out of an abundance of caution because of an HP issue noted in HOTSTUFF HS03519 25SEP23.

Bug 35969274 NSK: Correct test for a User Exit changing a file name while ignoring rows in the transaction.

Corrected Extracts tracking of metadata, when a User Exit modifies the output file name while periodically ignoring some records in a transaction; all at the same time of the output trail being rolled over to the next SeqNo based on size limits.

Bug 35824069 NSK: Cause Abend for orphaned/unassignable TDR.

Added a bounds check, to cause an Abend, when a DML record is to be output to a new trail and can't be assigned to the preceding TDR metadata record. This corrects the need to skip the record to continue, as seen in Bug 35969274.

Bug 35245617 NSK: Need support AES Encryption for pump Extract.

Enable Extract to use AES encryption over TCP/IP. Please consult reference manual for RMTHOST.

Bug 35245435 NSK: ENCRYPTTRAIL needs to have explicit parameter(s) on what method to use.

Deprecated the trail encryption method GGS (unsecure obfuscation). For more information, see the [How Data is Encrypted](#) in the *Administering Oracle GoldenGate for HP NonStop* guide.

Release 19.1.0.0.6 — August 2023

Patch 35646017 - ORACLE GOLDENGATE NSK V19.1.0.0.6 ON HP NONSTOP

Bug 35673868 - NSK: MRKRGGS record gets error 18 on file resolution.

Corrected Extract pump file resolution of MRKRGGS that was captured by logger from another node.

Bug 35688706 - NSK: Fix ScanForTDR after position quirk when the trail has a bad record

Corrected the LogDump ScanForTDR command after positioning when there is a bad record in the trail.

Bug 35485130 - NSK: Fix trace output of token offset in col function @GETTLFTOKEN()

Corrected RBA output when using TRACETLFTOKENS executing function @GETTLFTOKEN().

Bug 35645754/35229338 NSK:FIX nldexit to put the SSL stuff last in the object list.

Corrected the order of libraries included in the linking of a User Exit object as well as removing the unnecessary library libfloss.

Bug 35550881 - NSK: Extract/Audserv fix error message Error 0 in getpartitionarray

Corrected the error displayed if a primary partition is not found when expected.

Bug 35343640 - NSK: fix Extract parsing of RMTFILE parameter

Corrected parsing to allow ENCRYPTTRAIL on EXTFILE/RMTFILE.

Bug 35377869 - NSK: Fix Extract, ordering issue with DICTIONARY

Corrected a problem with marker records in a pump, when a Dictionary was either not provided or was provided and was placed after the trail entry, not before.

Bug 35586386 - NSK: Correct Extract, null ptr dereference in @GETTLFTOKEN()

Correct a trap in Extract/Replicat during the use of @GETTLFTOKEN(), when no tokens are present in the record.

Bug 35733813 NSK: Extract corrupts output trail after Expand errors using FASTIO.

Corrected Extract from corrupting the output trail after recovering from expand errors while using FASTIO.

Bug 35742684 NSK: Fix compatibility issue with Microservices.

Corrected Extract to handle a larger message size, while negotiating the TCP/IP connection handshake, when the target install is using the MicroServices Architecture. This problem could result in a hung process. See also [Known Issues](#) (Open issues).

Bug 35351419 NSK:EXTRACT_remote_writeblock unexpected response 'OK'

Corrected Extract from receiving remote_writeblock unexpected response 'OK' error, when a STOP command from GGSCI is issued and Extract is writing to multiple RMTTRAILS.

Release 19.1.0.0.5 — July 2023

Patch 35033821: OGG Veridata 12.2.1.4.230531 (PS4 BP7) C Agent on HP NONSTOP.

The release 19.1.0.0.5 was for the NSK C agent of Oracle GoldenGate Veridata for HP Nonstop

Release 19.1.0.0.4 — January 2023

Bug 34725333 NSK: GGSCI Info Programs will not show library for TNS objects.

Corrected a problem with the GGSCI info programs command that did not show the same results for TNS objects over multiple iterations.

Bug 34743111 NSK: Exttrail pri extents incorrectly used on sec causing trail file over 2Gig

Corrected a problem with the GGSCI Add/Alter EXTTRAIL command using Extents with a large primary extent, that caused trails created too large.

Bug 34779288 NSK: Fix exttrail error 45 on very long TDRs

Corrected a problem with Extract writing of a large metadata record near the EOF of a trail and not rolling over the output first.

Bug 34669079 NSK: Fix extract reporting an error from audserv

Corrected a bad error message when a TMF Extract is positioning using a timestamp and Audserv could not open the audit trail.

Bug 34792413 NSK: Fix trap in extract pump encryption

Corrected a problem when an Extract pump is reading an encrypted trail and it did not explicitly use EncryptTrail.

Bug 34436598 NSK: Fix memory leak caused by having metadata in the trail

Corrected a problem when new fabricated metadata for an existing file is not properly processed during trail rollover.

Bug 34335522 NSK: Extract send shutdown message to server

Corrected a problem in Extract processing the stop routine, to send the shutdown message to server collector, avoiding any TCP/IP errors.

Bug 34792423 NSK: Replicat does not clear last error after before image exception.

Corrected a problem in Replicat by clearing the last error flag when processing a Before Image record, which causes primary file name processing instead of the exceptions file name on a missing target file.

Bug 34851072 NSK: Extract pump needs to create a def for MRKRGGS when there is no TDR

Corrected a problem in an Extract pump to create proper metadata for the marker file when the input trail has no metadata.

Bug 34828993 NSK: SQLDiscard Testcase failed with TNS mode

Corrected a Replicat problem outputting update records to the `SQLDiscard` file with varying column details.

Bug 34483979 NSK: Fix parameter parsing in idlxc

Corrected an Extract problem parsing the options for the `RMTTASK` parameter.

Bug 34744271/34483969 NSK: Logdump fix scanfortdr after position

Corrected Logdump problems with the `ScanForTdr` command after positioning commands.

Bug 34053556 NSK: Add timestamp to server TCP/IP trace messages

Updated tracing messages in Extract to provide timestamp references.

Bug 33160622 NSK: Extract TCP/IP connection info

Updated Extract connection details in the report to show the resolved target machine name.

Release 19.1.0.0.3 — July 2022

Bug 34409700 NSK: B24MULTINETREMOTEFLLAG & @GETTLFTOKEN() throws errors on bad length test for a valid token less than 7.

Corrected the test on token length, which should be testing for a zero or negative length, but added the token header length causing an error when the length was less than 7.

Bug 34372127 NSK: Logdump remove TMF from the AES enabled logdumpa

Corrected an issue with the AES enabled `LOGDUMPA` version of logdump that could not be used on a system that did not have SQL/MX installed.

Bug 34405979 NSK:logdump not displaying table names.

Corrected missing file names on records when a trail is open and positioned to a specific location bypassing metadata.

Release 19.1.0.0.2 — June 2022

Bug 27578033 NSK: FILEHEADER TOKEN LASTCOMPLETEDCSN NOT ALWAYS PRESENT

Corrected an issue with trail recovery on restarting an Extract after an Abend on seqno and a rollover was issued from GGSCI.

Bug 33997547 NSK Add AES unsupported messaging

Added an error message AES Encryption is not supported with TNS mode objects.

Bug 34132583 NSK: handle corrupt ACI token buffer processing B24MULTINETREMOTEFLLAG & @GETTLFTOKEN()

Corrected problem when parsing encountered a corrupted token eye catcher from the source file; causing the process to loop.

Bug 34206094 NSK: Update test for header token for false positive in ACI token buffer processing B24MULTINETREMOTEFLLAG & @GETTLFTOKEN()

Corrected a problem when parsing encountered a combination of dates that appeared to match the token header and required length; causing the process to loop.

Bug 34162332 NSK: Incorrect positioning for fileheader update causes trail corruption..

Corrected the possibility of causing a bad record in a `RMTTRAIL` when Server collector positioned for an update to the file header.

Bug 34162152 NSK: Correct tests on output trail format and requiring a restart_abend rec..

Corrected Extract to correctly output restart abend records based on the `FORMAT RELEASE` version.

Bug 34132607 NSK: Unable to position Specialrun process by param when reading file, not trail..

Corrected a problem when running a SpecialRun Replicat and using parameter `READEXTRBA`; causing an error of "metadata lookup failed".

Bug 34228302 NSK: Force buffer flush on first DML after a file header.

Corrected a problem when the first I/O caused the file header to be updated with the last completed CSN but the corresponding data had not been flushed to the trail.

Bug 34166592/34187473 Logdump updates.

Corrected issues in Logdump for Base24 Token diagnostic and ScanForCSNs commands.

Release 19.1.0.0.1 — March 2022

Bug 26949733 - NSK: Update Server collector to eval hometermmessages

`SERVER` will now evaluate the `GLOBALS` parameter `hometermmessages`.

As `SERVER` by default writes message to the `hometerm`, `hometermmessages` `NO` would be required.

This will not affect other applications since the default of those are `NO` already.

Bug 33245747 - NSK: Server writing EMS from OpenSys EMSCLNT needs to truncate short msgs

Corrected a problem were a garbage message like `vm found` could be seen in EMS from OpenSys after a normal message was written.

Bug 33048766 - NSK: Extract restart abend record after repair.

Corrected Extract to output a restart abend record to the trail if needed after an alter from GGSCI reset the status to `STOPPED`.

Corrected Extract Pump to send through TMF Extracts restart abend record.

Bug 33542466 - NSK: Timeout LAGSTATS in both Extract and Replicat.

Timeout `LAGSTATS` in both Extract and Replicat after period of time. Diagnostic tool was never intended to be used 24/7.

Bug 33651570 - NSK: Fix recovery when old seqnos exist.

Corrected Extract to handle the condition when old file sequenced trails are on disk and recovery was done on the last sequence but subsequent writing restarted on the checkpointed sequence.

Bug 33745780 - NSK: Change trail encryption to be ENCKEYS compatible with opensys.

Fix encryption via `ENCKEYS` to be compatible with OpenSys. This allows encryption methods for AES as long as the OpenSys usage is also using `ENCKEYS` and not the Oracle wallet.

Bug 33775487 - NSK: GGSCI doesn't check for process name already used for another group.

Added bounds check on GGSCI Add command for Process Name and on Add or Alter command of a group.

Bug 33779995/33115969 - NSK: Fix bio position cast on files over 2 gig.

Corrected Replicat from possible trap or data corruption when positioning in an entry-sequenced target file over 2gig.

Bug 33851315 - NSK: Throw warning in Extract pump on reading metadata and mapped with def.

Corrected Extract as a pump, to report a warning message for ignoring a provided DEF that is mapped, because source metadata was in the trail.

Bug 33766208 - NSK: A pump does not build column info for MRKRGGs.

Correct Extract to output metadata TDR records for `MRKRGGs` (marker) and `GGSTRANS` (network transaction) files.

Bug 33850995 - NSK: Change idlxc to allow ipc_timeout to be changed.

Added a `DEFINE` for `Extract` used in `RMTTASK` mode to set the IP connection timeout.
add define =IPC_TIMEOUT, file \$zNNNN

NNNN is in centiseconds.

Bug 33346462 - NSK: NLDEXIT can't find libssl, libcrypt, & libflos.

Corrected NLDEXIT on x86 from receiving error:

FATAL ERROR **** [1083] - linker halting:

Cannot find libcrypt, given in -l option.

Bug 33387590 - NSK: Audserv check for presence of SQL/MX.

Added a runtime bounds check to validate the install of Audserv for the correct use depending on whether or not SQL/MX is installed on the system.

Bug 33185947 - NSK: Print banner on report rollover.

Print program banner at report rollover to preserve program details.

Bug 33277189 - NSK: Update @GETTLFTOKEN for a 4th QZ DDL option.

Updated the function `@GETTLFTOKEN()`, adding the case for the source record group field `USER-DATA` contains the embedded length and the target def does not.

Bug 33095748 - NSK TNS mode: Replicat abends with arithmetic fault in Colmapping of Packed Decimals Type 189.

Corrected Packed Decimal Type 189 factor multiplier with length of 10 for TNS.

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Bug 30184435: NSK: RFE to support AES encryption.

Added the Advanced Encryption Standard (AES) method to encrypt trails.

Bug 32718555 - Extract fails after many to one file mapping is aged off

Corrected Extract and Replicat file aging code that removed a target when it was still in use when map statements configured many source files to one target.

Bug 32716591 - Add message from repair when truncating last record as a recovery step

Corrected the displayed RBA from the repaired record / truncated record during recovery re-start.

Bug 32454264 - Print a message for CSN duplicate suppression

Added a message during startup when records are filtered between the checkpointed CSN and the last completed CSN written to the trail.

Bug 32449638 - Fix abend on URF records in pump and replicat

Corrected a problem in Extract Pump and Replicat processing OpenSys URF records which caused an abend with OGG ERROR 101 buildPKUpdateBeforeKey.

Bug 32070271 - Clean up Fabricated TDR for Enscribe Files.

Corrected fabricated metadata for Enscribe files, metadata TDR didn't have the correct values for `fetch_offset`, `ext_len`, 32 bit (format 1) syskey len.

Bug 32059680 - Extract Fabricates TDR and runs on missing target file.

Corrected a problem where Extract should have abended on a missing target file/table and not continue to run.

Bug 31850562 - Obsolete NOOBJECTDEFS

Deprecated the parameter `NOOBJECTDEFS`, metadata in trail is required.

Bug 32016232 - Deprecate support of PassThru after removal of NoObjectDefs

Deprecated the parameter `PASSTHRU` for Extract pump, metadata in trail is required.

Bug 31991928 - write kanji/ksc charset info in def and trail metadata

Corrected the column charset value in metadata for SQL/MP columns with kanji and KSC (Korean) encoding.

Bug 31879026 - Allow FileResolve Immediate to work in current code

Corrected a problem that would cause Extract to skip wild carded files from being included when using FileResolve Immediate.

Bug 31662858 - Extract does not fabricate Enscribe metadata when target is OpenSys

Changed Extract to abend when Enscribe data is send to OpenSys without a valid Dictionary and DEF entry.

Bug 31657401 - Fix incorrect warning on altname

Corrected a warning on `ALTNAME` when there are multiple maps for a source and the same `ALTNAME` is specified for each.

Bug 31409938 - Have Extract & Replicat enable/disable Oracle GoldenGate encryption from fileheader

Enhanced detection of Oracle GoldenGate trail encryption automatically handling conversion when reading encrypted trails and `DECRYPTTRAIL` was not used.

Bug 31318069 - extract handle error reply from audserv during startup

Corrected Extract to process and report errors from Audserv when starting.

Bug 30891839 - targetname not propagated on fileops

Corrected Extract to use the TargetName value when writing fileops to the trail.

Bug 30564333 -Allow ansinames in a userexit

Added User Exit call backs for Ansi name format from OpenSys. See reference manual for details.

Bug 30223162 - Bounds check target file with TARGETDEF is not unstructured

Changed Extract and Replicat to abend when a mapped file is unstructured and requires metadata.

Bug 30155136 - Correct TDR Level value for fabricated Enscribe layouts

Corrected the level value for columns in metadata when fabricated for Enscribe files.

Bug 30090703 - Fix error message when extract/replicat objects are not in the install vol

Enhanced the error message of a bad installation or running objects from the wrong location.

Bug 29956638 - Add wildcard logic to use TargetName as source name replacement.

Enhanced the TargetName option of map to use wildcard logic to use the original source name to replace the target name.

Bug 29901986 - Change ShortReadDelay default to 0

Changed the default for ShortReadDelay from 1 to 0.

Bug 28527232 - Fix etparse for tdr indexes on longrec fragments

Corrected Extract Pump, Replicat to correctly assemble long record fragments to build large metadata TDR records.

Bug 27887170 - 64-BIT TRANSMEM

Enhanced Extract to manage the memory allocation for uncommitted transaction data out of Kernel Managed Swap (KMSF) space.

Bug 32734931 - Add messages for ScanForObjectDefs

Added diagnostic messages when restarting Extract/Replicat cause a trail scan to get metadata.

Bug 32103100 - Restore the historic default behavior for altfilechar

Corrected an error 13, bad filename on a target file created with an `ALTFILE` when using `CREATETEMPLATE`.

Bug 32016578 - Replicat traps on memory corruption processing large SQL/MP statements over 10,000 bytes

Corrected a trap in Replicat, Extract, and Defgen, on SQL/MP tables containing a large amount of nullable columns that cause a sql statement over 10,000 bytes.

Bug 31879086 - replicat statement aging

Corrected a problem while aging cached SQL/MP statements, causing an old statement to be used for the wrong table.

Bug 31838066 - Handle OpenSys lower case ANSI names.

Corrected a problem with quoted lower case ANSI table names from OpenSys trails.

Bug 31683533 - Allow numpartions = 0 when replicating a create

Corrected Replicat to handle user application captured file creates that set itemcode attributes for num partitions to be set to zero. Specifically itemcode 221.

Bug 31486684 - PKUpdate to relative file using ALTKEY fails.

Corrected processing of OpenSys PKUpdate to Enscribe Relative files using USEALTKEY.

Bug 31350305 - Lock out User Exit callback SET_TARGET_FILENAME_EXTERNAL for Replicat

Corrected user exit call back to not accept external format Ansi names for a target.

Bug 31124095 - Replicat Does not clear last error info on exception after ignore/discard

Corrected an error resolving a map after a DML that is discarded or ignored from Exception file/table didn't clear the last error.

Bug 30960077- Dont consider redefines cols as keycols

Corrected a problem interpreting metadata and setting Enscribe redefined columns as part of key causing "Target key column is not part of map" errors.

Bug 30143477 - Allow Replicat to use ALTNAME like Extract

Enhanced Replicat to allow ALTNAME like Extract. This allows trails to be processed for source files not visible through expand.

Bug 30067749 - Correct Colmapping of Packed Decimals Type 189

Corrected the precision of packed decimal data types.

Bug 29995720 - Provide mapping source userid to a target userid during create and setmode 2

Added a new parameter CREATEUSINGTARGETUSERID for a map to set target file create owner.

Bug 29228021 - Fix sqlexec discard output for binary values

Corrected output to the discard file from sqlexec failure for binary column values.

Bug 28776613 - Don't include the local repctxt in networkcheckpoints

Corrected Replicat to not include local repctxt in networkcheckpoints.

Bug 27950864 - ADD SUPPORT FOR REPLICATION OF ARTYPE_UPSERT FROM OPENSYS

Added support in Extract Pump and Replicat for OpenSys UpSert records.

Bug 30506201 - Audserv needs to respond with its current version

Added version bounds checking and reporting between Audserv and Extract.

Bug 31020496 - Change audserv param NoAbendOnSecurityCheck to affect only wild carded names

Corrected Extract to only allow `AUDSERVPARAM NoAbendOnSecurityCheck` to skip wild carded names, causing Extract to abend on fully qualified names that don't pass.

Bug 31314108 - Extract takes bad POS in audit when AUX is idle on test machine

Corrected roll forward logic to the specified begin time in an Aux trail on idle systems.

Bug 30377776 - Add ggsci command GetMgrVersion

Added GGSCI command to obtain the version of a target Oracle GoldenGate install.

Bug 31886245 - ggsci alter replciat to read a user data file

Corrected GGSCI from allowing option `FILETYPE` for Replicat.

Bug 28528771 - Fix double reporting lag for TMF extracts

Corrected mgr from report the same TMF lag details twice.

Bug 27981841 - Collector should Detect a bad Filename from OPENsys during recovery

Corrected a problem when a target trail file was purged and extract re-started causing server collector to abend.

Bug 30944958 - Correct error return on flush to disk in server.

Corrected Server Collector to return the error to Extract when disk flush fails.

Bug 29796489 - Logdump add PTLFTokens options

Enhanced Logdump, added new command to detail Base24 TLF/PTLF Tokens in a trail record.

Bug 29598793 - with metadata in trail, display record images like fieldcomp data

Enhanced Logdump detail data format to display data by column.

30062923 - Logdump fix display of packed decimal metadata

Corrected the display of Packed Decimals Type 189

30143485 - Tracking ticket for OpenSys 9-12 digit timestamps w/o time zones

Enhanced Extract and Replicat, added options to the `@DATE()` function to enable processing of OpenSys formatted timestamps that have as many as 12 fractional positions and time zone.

Bug 32123777 - Change method of obtaining trail location restrictions

Corrected method of determining restriction write locations for Extract, Server Collector, and MGR from hardcoded `$AUDIT(x)` to query TMF SPI for active data vols.

Bug 26122400 - OTHER NSK ADD @FUNCTION FOR BASE24 TOKEN RETRIVAL

Enhanced Extract and Replicat to process Base24 TLF/PTLF de-tokenizing using new `@function()`, removing the requirement of using the Base24 T24 User Exit.

Bug 32690601 - Correct Base24 token parsing

Enhanced Extract and Replicat adding a new parameter to process the Base24 Multi Network Remote Flag Add/Update "BK", removing the requirement of using the D24 user exit for this usage.

Bug 31487216 - Fix synctab sql syntax error

Corrected SQL/MP syntax for key values when building fetch statement for compare.

Added missing data types for intervals.

Bug 32843954 - Extract pump writes bad num key cols value to trail causing Replicat err

Corrected a problem with an Extract pump that writes a bad num key cols value to the metadata TDR record for a clustered key file, causing Replicat to error with:

"Memory allocation error, zero byte malloc".

Bug 32962362 - Replicat notify failure

Corrected Replicat from not sending `EXITPARAMS` to the User Exit when the first read I/O is a `FILEOP`.

Bug 32823121 - Extract/Replicat need to bounds check GGS tokens

Corrected Extract/Replicat to not loop or trap when reading corrupted GGS Tokens.

Bug 32843183 - Need to set string data types as binary input, broken in 12.2

Corrected binary input value for string SQL/MP data types with binary data being extracted using `FORMATASCII` or `FORMATXML`.

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.

When you contact support, provide full and concise details. Use the PAK utility to provide all reports for each of a given process group of Extract (`TMF` and or `PUMP`) as well as Replicat for full source to target details. Use the same PAK utility to provide any relevant `ZZSA` files and matching object file.

Example of using PAK:

```
TACL> PAK Pakfile, <$vol>.<subvol>.<group name>*, Open
```

Known Issues

This chapter describes the known issues at the time of Oracle GoldenGate HP NonStop Release.

Metadata Requirement

With the parameters `PASSTHRU` and `NOOBJECTDEFS` having been deprecated, Extract may need access to source metadata to be able to write it to the output trails. This is subjective to your need and usage of column information downstream.

By default a metadata record (TDR) is written to the trail for each file or table before its first DML.

In the case of SQL/MP, the catalog is already accessible and nothing needs to be changed.

In the case of Enscribe files, if there is no `DICTIONARY` and `DEF` provided, Extract will fabricate metadata based solely on the details obtained from `FILEINFO`. While this is sufficient for the basic mapping of `FILE A` to `FILE A`, there would be no means to use `ColMap`, `FILTER/WHERE`, `KEYCOLS`, and others features or functions that would require column names and data type information. If this functionality is required, then you must use a `DICTIONARY` and provide a `DEF` for each `FILE`.

The metadata is required by an OpenSys target, and therefore the Extract writing remote trails to another OS is no longer allowed to send fabricated metadata for Enscribe files. You must provide a `DICTIONARY` and provide a `DEF` for each `FILE`. This eliminates the requirement of running `DEFGEN` to provide the OpenSys Replicat of `SOURCEDEFS`.

When Replicating from an OpenSys source to HP NonStop, as of HP NonStop v12.3, you no longer need to use `DEFGEN` to provide column information to the remote Extract on OpenSys. No mapping of filenames or columns is required. This can now all be accomplished in the NSK Replicat because of metadata in the trail.

For more information about trails, please see Oracle GoldenGate Self-Describing Trail Files in the *Fusion Middleware Administering Oracle GoldenGate for HP NonStop (Guardian)*.

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 versions be of the same major release versions, but if this is not possible and the target version is older than the source, the output data trails must be created by Extract in the targets version formatting, use the appropriate `FORMAT RELEASE <major.minor>` option with the `EXTTRAIL/RMTTRAIL` parameter.

Open Issues

- Whenever an Extract abends, there is always the potential of a partial record being written out to the end of an `EXTTRAIL`. The TNS compiled object of Extract is unable to repair a partial record after a subsequent restart. This could lead to unexpected problems downstream. Oracle recommends you to only use Native Extract and Replicat objects.
- When configuring Extract to send to an OpenSys Microservices install, ensure that you are using `TCPBufSize 27000`.
- `LOGGER` can write bad GGS Tokens to the trail after a backup take over from a CPU failure.
- The Oracle GoldenGate product cannot be installed on volumes of 7 digits.
- Extract and Replicat cannot process ANSI names longer than 48 bytes.
- Oracle GoldenGate for HP NonStop does not support SSL/TSL encryption to and from OpenSys MicroServices installs. To communicate with a MicroServices install you must not use SSL security when configuring the deployment.

Note:

- It is recommended NOT to use FastReads on a trail that is being written with normal 4K I/O and do not use FastReads in a low volume situation. The most common problems are bad records read in an Extract Pump/Replicat, Replicat receiving an error 59, or corrupted data. This issue can be caused 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 64 bit primary key access on a `FORMAT 1` file, those updates will be captured 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.

Related Information

The Oracle GoldenGate Product Documentation Libraries are found at:

[Oracle GoldenGate Documentation](#)

The Oracle GoldenGate related 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>

<https://www.oracle.com/database/technologies/high-availability/oracle-database-maa-best-practices.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>.

Oracle Fusion Middleware Release Notes for Oracle GoldenGate for HP NonStop (Guardian), 19c (19.1.0.0.0)

F42273-10

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