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Oracle Trace for OpenVMS

Release Notes

Release 7.2.0.1

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This document provides release notes for Oracle Trace for OpenVMS for the HP OpenVMS Industry Standard 64 for Integrity Servers operating system.

ORACLE®

Oracle Trace for OpenVMS Release Notes Release 7.2.0.1 for the HP OpenVMS Industry Standard 64 for Integrity Servers operating system.

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Release Notes for Oracle Trace for OpenVMS Release 7.2.0.1

This document provides release notes for Oracle Trace for the HP OpenVMS Industry Standard 64 for Integrity Servers (OpenVMS I64) operating system. The release notes describe restrictions and problems that have been corrected for this version of Oracle Trace for OpenVMS that are not documented elsewhere.

1.1 Installation Instructions

Prior to the installation, you must execute the following command on each node in the cluster that shares the same EPC\$ADMIN_DB:

```
$ COLL STOP SYSTEM/ABORT
```

Install the kit using the VMSINSTAL utility by logging in to the SYSTEM account and typing the following command:

```
$ SYS$UPDATE:VMSINSTAL EPC07201I072 [saveaset location]
```

The saveaset location is a disk directory that contains the kit saveaset.

After the installation, execute the command @SYS\$STARTUP:EPC\$STARTUP.COM to restart the EPC\$REGISTRAR process.

Refer to the *Oracle Trace for OpenVMS Installation Guide* for Release 7.2 for complete installation instructions.

1.2 Software Errors Fixed in Trace Release 7.2

This kit contains all fixes made to previous versions of Oracle Trace for OpenVMS and also addresses the problems described in the following sections.

1.2.1 ORACLE Trace Did Not Collect Data for the RDBVMS Facility

Oracle Trace did not collect data for the RDBVMS facility for Oracle Rdb Release 7.1-100 and Release 7.1-101. This was because the version number specified by Oracle Rdb to the Oracle Trace Service Routine EPC\$INIT was V7.1-10, but the version number inserted by the Oracle Rdb installation into the module RDBVMSV7.1-10 in the Trace VMS SYS\$SHARE:EPC\$FACILITY.TLB text library was V7.1-100 or V7.1-101. This module could then be extracted and used to set the RDBVMS facility definition and version in the Trace Administration database. The version string passed to the Oracle Trace Service Routine EPC\$INIT must match identically the version specified in the facility definition in the Trace Administration database. Because this was not true for the RDBVMS facility, when an RDBVMS Trace collection was scheduled, no RDBVMS data was collected.

This has been corrected for Oracle Rdb Release 7.1-200 and later. The version number passed to EPC\$INIT for the RDBVMS facility will exactly match the RDBVMS facility version inserted by the Oracle Rdb installation procedure into SYS\$SHARE:EPC\$FACILITY.TLB, which can then be used to define the RDBVMS facility in the Trace Administration database. For all Oracle Rdb 7.2-n releases, the version is V7.2.

The following example shows that for Oracle Rdb Release 7.1-100 and Release 7.1-101, the RDBVMS facility data was not getting collected (no arrow points to the RDBVMS facility) when the Oracle Trace COLLECT SHOW REGISTER/NOCLUSTER command is issued. Data is getting collected for the ATM_SAMPLE facility as indicated by the arrow.

```
$ COLLECT SHOW REGISTER/NOCLUSTER
Registrations actively collecting
Node: CLNODE Collection: SAMPLE Selection: SAMPLE_SELECTION
                        _COLLECTION
Process Process Name Facility Version Registration Id
-----
20638408 _RTA2: RDBVMS V7.1-101
-> ATM V1.2-0 ATM APPLICATION EXT
   _SAMPLE
```

The only workaround for this problem would be to change the version numbers in the Oracle Trace administration database tables from V7.100 or V7.101 to V7.1-10.

1.2.2 Finding the Transaction Type of a Particular Transaction within a Trace Database

The table EPC\$1_221_TRANSACTION in the formatted Oracle Trace database has a column named LOCK_MODE_START of longword datatype. The values of this column indicate the type of transaction a particular transaction was:

Value	Transaction Type
8	Read only
9	Read write
14	Batch update

1.2.3 ORACLE Trace Collect Format Command Could Not Create a Database After Rdb Upgrade

There was a problem with Oracle Trace V2.4.1 where, after an upgrade to Oracle Rdb Release 7.0.7.1, the Collect Format command was no longer able to successfully create the database where the formatted data is stored. This problem was fixed in Oracle Trace V2.4.1.1 Update 01. Note that this problem has been fixed in Oracle Trace, not Oracle Rdb.

The following example shows the problem that the Oracle Trace Collect Format command had creating a database when Oracle Rdb was upgraded to Oracle Rdb Release 7.0.7.1.

```
$ COLLECT FORMAT SAMPLE_DATA.DAT SAMPLE_DATA.RDB
%EPC-E-FMT_FAILURE, Formatting failed
-RDMS-F-NOEUACCESS, unable to acquire exclusive access to database
%EPC-E-OPFAIL, Operation failed
```


1.3 Software Errors Fixed in Trace Release 7.2.0.1

1.3.1 Invalid Oracle Trace Summary Report Elapsed Time Statistics

There was a problem with the Summary Report Elapsed Time statistics output by Oracle Trace on the HP Open VMS Integrity platform which caused incorrect Elapsed Time values to be put out. These values could consist of large positive or large negative numbers or the value "NaNQ". This happened because Oracle Trace on the Integrity platform uses IEEE floating point but a system service was being used to calculate the Elapsed Time statistics which did not expect IEEE floating point values. This problem has been corrected and the correct Elapsed Time statistical values will now be output for Oracle Trace Summary reports. Note that this problem only happened for Summary Report Elapsed Time statistics on the Integrity platform.

The following example of this problem shows that the column for the Elapsed Time statistics in an Oracle Trace Summary report had incorrect values that were too large or negative. The Elapsed Time statistics could also contain the value "NaNQ" instead of a numerical value.

```
$ set verify
$ @REPORTRDB.COM
collect report rdb_db-
/type=summary-
/title="Rdb/VMS Summary Report"-
/statistics=ALL-
/output=rdb_summary.txt
%EPC-S-RPCL_SUCCESS, Report successfully completed
$ type RDB_SUMMARY.TXT

9-MAY-2007 17:37                Rdb/VMS Summary Report                Page 2
Selection: RDB_SELECTION                Oracle Trace V7.2-00

Event: Request Actual In Facility: RDBVMS                Version: V7.2

           Elapsed      AIJ File      As Batch      As Read      As Write
           (seconds)    Writes      Write      Stall      Stall
Minimum    -40581258          0          0          0          0
Maximum    122303416          0          0          0          0
Mean       -21358556         0.00       0.00       0.00       0.00
Std Dev    918330682         0.00       0.00       0.00       0.00
95 Prct    158634256         0.00       0.00       0.00       0.00
Total     -81162516          0          0          0          0
```

This problem has been corrected in Oracle Trace Release 7.2.0.1.

1.3.2 Oracle Trace Standard Deviation, 95 Percentile Precision Problems

There was a problem with the Summary Report Standard Deviation and 95 Percentile statistics output by Oracle Trace on the HP Open VMS Integrity platform which could cause invalid results if these statistics were being calculated based on large numerical values. Invalid results such as the value "NaNQ" or "NaNQ00" could be output. This problem happened because the floating point precision used for these calculations was not adequate for large numerical values. This caused too much loss of precision due to rounding of values during the repeated calculations used to determine these statistics. This problem has been fixed and now the proper precision will be used to calculate these statistics. Note that this problem only happened for Summary Report Standard Deviation and 95 Percentile statistics on the Integrity platform.

The following example of this problem shows that the column for the "REQ OPER" statistics in an Oracle Trace Summary report had incorrect values for the Standard Deviation and 95 Percentile statistics. Instead of the correct numerical values, "NaNQ00" was output because the calculation had invalid results since the floating point precision used was too small leading to too much rounding of numerical values during the repeated calculations necessary to determine these statistics.

```

$ set verify
$ @REPORTRDB.COM
collect report rdb_db-
/type=summary-
/title="Rdb/VMS Summary Report"-
/statistics=(STANDARD_DEVIATION,95_PERCENTILE)-
/output=rdb_summary.txt
%EPC-S-RPCL_SUCCESS, Report successfully completed
$ type RDB_SUMMARY.TXT
9-MAY-2007 17:37                Rdb/VMS Summary Report                Page 1
Selection: RDB_SELECTION                Oracle Trace V7.2-00

Event: Database                In Facility: RDBVMS                Version: V7.2

                Lock Stall    Pagefaults    Pagefault    Prom    Req Oper
                Time                I/Os    Deadlocks

Std Dev        2263.05        17.25        0.55        0.00    NaNQ00
95 Prct        4961.93        42.81        1.34        0.00    NaNQ00

```

The only way to avoid this problem is to limit the collection time used to gather the statistics to a shorter duration so smaller numerical values will be used to determine these statistics.

This problem has been corrected in Oracle Trace Release 7.2.0.1.