

ORACLE®

Oracle 12c OpenVMS Data Base Update

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Oracle Server OpenVMS Porting
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Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Oracle 12c OpenVMS Port Update

- Product Review/Objectives
 - 11.2.0.4.0 PSU and Patch Information
- Review OpenVMS Porting
- The Merge and Build Process
- Quality Assurance
- Roadmap

A man with glasses and a denim shirt is gesturing while talking to a woman in a yellow top. They are sitting at a wooden table with several papers featuring charts and graphs. A coffee cup and a smartphone are also on the table. The background is a blurred office environment.

Product Review/Objectives

Certification Documentation

- My Oracle Support (MOS) Document
 - <https://support.oracle.com>
 - **HP Itanium OpenVMS Certification Matrix Doc ID 377470.1**
 - **Note**
 - Please use this document as the current support matrix
 - It is updated frequently
 - This document does not limit Oracle in what will be delivered
 - Primary function is to document high volume releases

Oracle Database 11gR2 on OpenVMS

- 11.2.0.4.0 is final Patch Set for the 11.2 code line
 - Support runs to 2021
 - Release Schedule of Current Database Releases MOS note 742060.1
 - Base bug number to locate PSU's
 - Oct 2018 PSU, Base Patch 26392168: DATABASE PATCH SET UPDATE 11.2.0.4.181016
 - This release was delayed to FIPS MES 145 security development
 - Jan 2019 PSU, Base Patch 2872962: Database Patch Set Update 11.2.0.4.190115
 - Does not include FIPS MES 145
- OpenVMS 11.2.0.4 FAQ
 - Reference MOS Note 2012766.1

Note on native OpenVMS Java 1.8

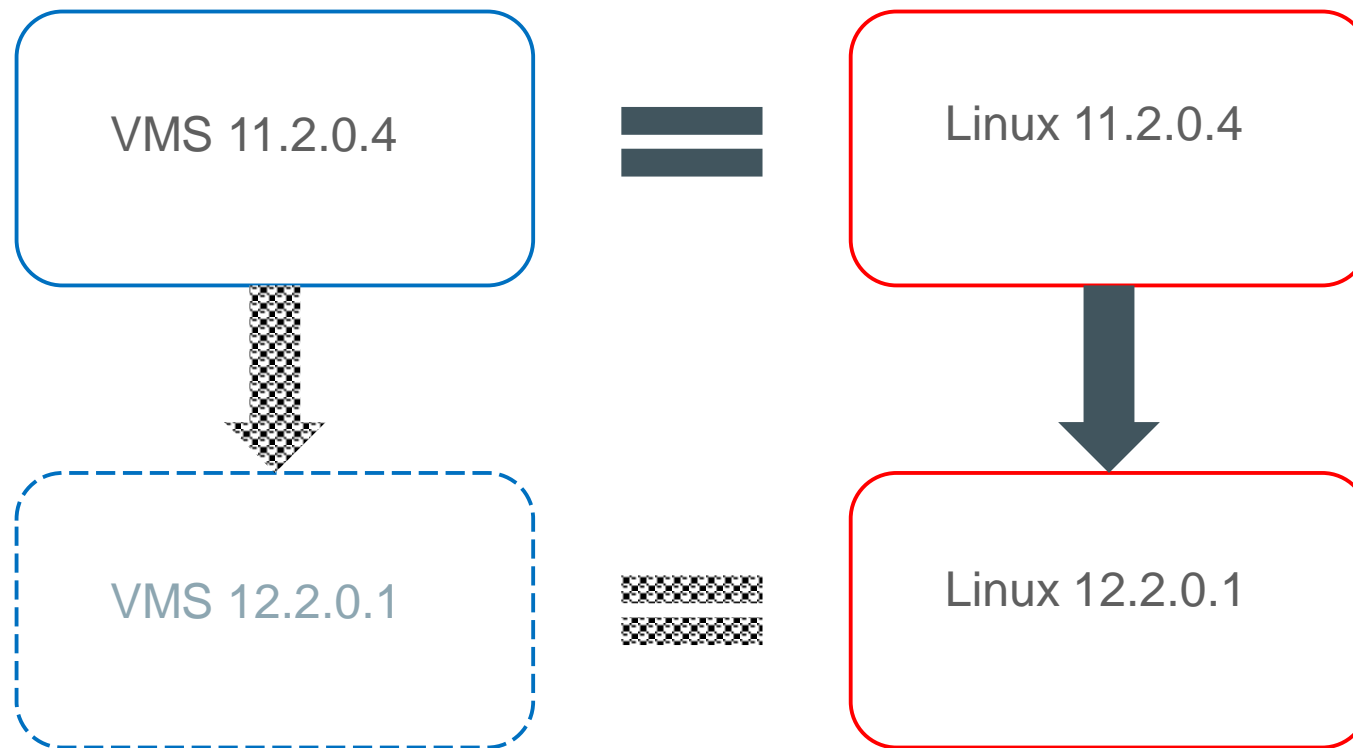
- HPE release notes document that the interface to OpenVMS Java 1.8 is a 64 bit interface.
 - Java 1.4-2, 1.5, 1.6 all had a 32 bit interface
 - Oracle Database on OpenVMS supports only a 32 bit interface
 - https://www.hpe.com/global/java/documentation/1.8.0/ivms/docs/release_notes.html
 - Document in compatibility section
- Using Java 1.8 from a non-OpenVMS platform is supported against the OpenVMS 11gR2 database.
 - Note: the documentation states that ojdbc6.jar is the interface to the oracle database
 - http://www.oracle.com/technetwork/database/enterprise-edition/jdbc-faq-090281.html#01_02

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Review OpenVMS Porting

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Merging of Source Code Updates



OpenVMS Porting Environment (VPE)

- 792117 Entries in 10.2.0.5.0
 - Total real files for product is 711109
 - Test support environment has ~ 200K files
 - Classic Source files ~ 45K files
 - Java Sources ~ 79K files
- 1111340 Entries in 11gR2 VMS labels
 - Total real files for product is 991549
 - Test support environment has ~ 300K files
 - Classic Source files ~ 75 K files
 - Java sources ~ 115K files
 - 40% Growth

Types of Files in 12cR2

- Total entries in label – 1,708,870
- Files – 1,434,683
- Extensions 17,303

290	msg	2623	png	6712	properties
395	mk	2944	pl	6778	c
782	pp	3400	htm	6903	html
811	hxx	3554	txt	13966	sql
1048	pm	3620	class	17275	tsc
1099	cpp	3989	xlf	20341	xml
1236	f90	4142	xliff	27825	jar
1425	out	4793	h	30269	log
1858	dat	4837	lst	62087	java

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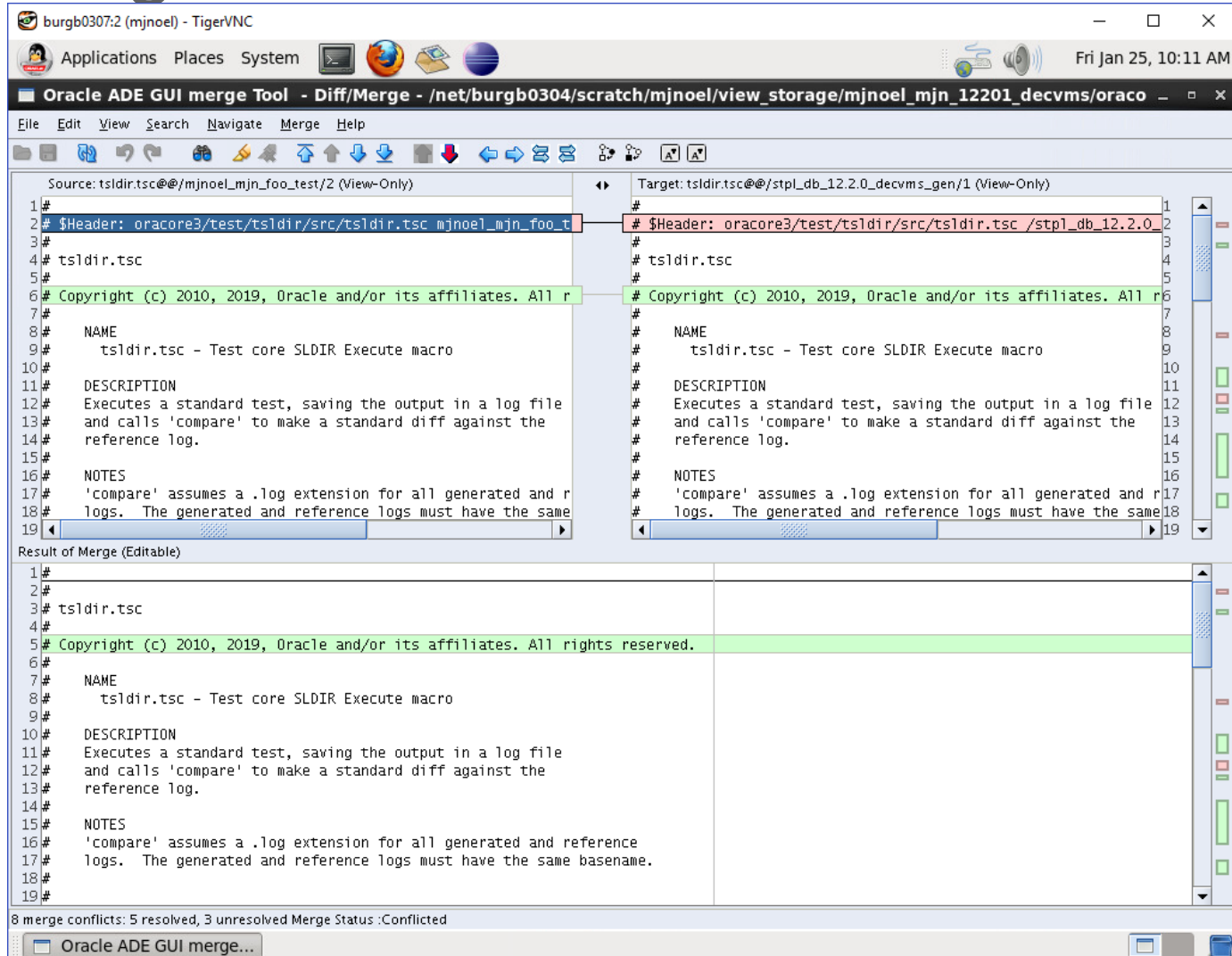
Merging of Source Code Updates

- 1.7 million source files
 - 11.2.0.4 had 1.1 million
 - For OpenVMS there are ~6400 files that need porting that are known
 - More files may need to be explored.
- VSI C has a robust C Runtime Library
 - Which allows our porting effort to utilize “base engineering code”
 - This gives us an opportunity to start run time testing earlier.

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The Merge and Build Process

Oracle 12c OpenVMS Port Update The Merge Process



The screenshot shows the Oracle ADE GUI merge tool interface. The title bar indicates the window is titled "Oracle ADE GUI merge Tool - Diff/Merge - /net/burgb0304/scratch/mjnoel/view_storage/mjnoel_mjn_12201_decvms/oraco". The interface is divided into three main panes. The top-left pane shows the "Source" file: "tsldir.tsc@@/mjnoel_mjn_foo_test/2 (View-Only)". The top-right pane shows the "Target" file: "tsldir.tsc@@/stp1_db_12.2.0_decvms_gen/1 (View-Only)". Both panes display a text file with a header, copyright notice, and a description. The bottom pane shows the "Result of Merge (Editable)". The status bar at the bottom indicates "8 merge conflicts: 5 resolved, 3 unresolved Merge Status: Conflicted".

```
Source: tsldir.tsc@@/mjnoel_mjn_foo_test/2 (View-Only)
1 #
2 # $Header: oracore3/test/tsldir/src/tsldir.tsc mjnoel_mjn_foo_t
3 #
4 # tsldir.tsc
5 #
6 # Copyright (c) 2010, 2019, Oracle and/or its affiliates. All r
7 #
8 # NAME
9 #   tsldir.tsc - Test core SLDIR Execute macro
10 #
11 # DESCRIPTION
12 #   Executes a standard test, saving the output in a log file
13 #   and calls 'compare' to make a standard diff against the
14 #   reference log.
15 #
16 # NOTES
17 #   'compare' assumes a .log extension for all generated and r
18 #   logs. The generated and reference logs must have the same
19 #

Target: tsldir.tsc@@/stp1_db_12.2.0_decvms_gen/1 (View-Only)
1 #
2 # $Header: oracore3/test/tsldir/src/tsldir.tsc /stp1_db_12.2.0
3 #
4 # tsldir.tsc
5 #
6 # Copyright (c) 2010, 2019, Oracle and/or its affiliates. All r
7 #
8 # NAME
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Result of Merge (Editable)
1 #
2 #
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5 # Copyright (c) 2010, 2019, Oracle and/or its affiliates. All rights reserved.
6 #
7 # NAME
8 #   tsldir.tsc - Test core SLDIR Execute macro
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10 # DESCRIPTION
11 #   Executes a standard test, saving the output in a log file
12 #   and calls 'compare' to make a standard diff against the
13 #   reference log.
14 #
15 # NOTES
16 #   'compare' assumes a .log extension for all generated and reference
17 #   logs. The generated and reference logs must have the same basename.
18 #
19 #

8 merge conflicts: 5 resolved, 3 unresolved Merge Status: Conflicted
Oracle ADE GUI merge...
```


Relationship with VMS Software Inc

- Oracle is working with VSI on latest IP stack addressing these issues
 - Issues regarding
 - AF_UNIX, Routing Sockets
 - SO_PEERCREC
 - Lockf() function.
 - Extremely responsive in helping us with RAC
 - Debugging Runtime library issues/questions.

The Build Process

- Components
 - Bundle Build vs Component Build
 - Oracore3,nlsrtl3,network...plsqli,sqlplus,precomp...rdbms
 - First time trying to layer our build process to allow for component builds instead of full bundle build.
 - Product Regressions
 - Identify Short Regressions (SRG) Long Regressions (LRG)
 - What says the Server is ready
 - Build/test/rebuild/
 - Debugging limitations
 - “startup/nomount”
 - Detached process debugging.

Quality Assurance

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Quality Assurance

- Thousands of Oracle Multi-platform Regression Tests
 - Exercise all code paths
- Short Regression Tests
- Oracle Corporate Defined Certification Testing
- Long Regression Test
- OpenVMS High Priority Tests
- Comparison of results with those from Base Engineering

Roadmap

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