

ORACLE®

Oracle 12c/19c OpenVMS Database Update

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Oracle Server OpenVMS Porting
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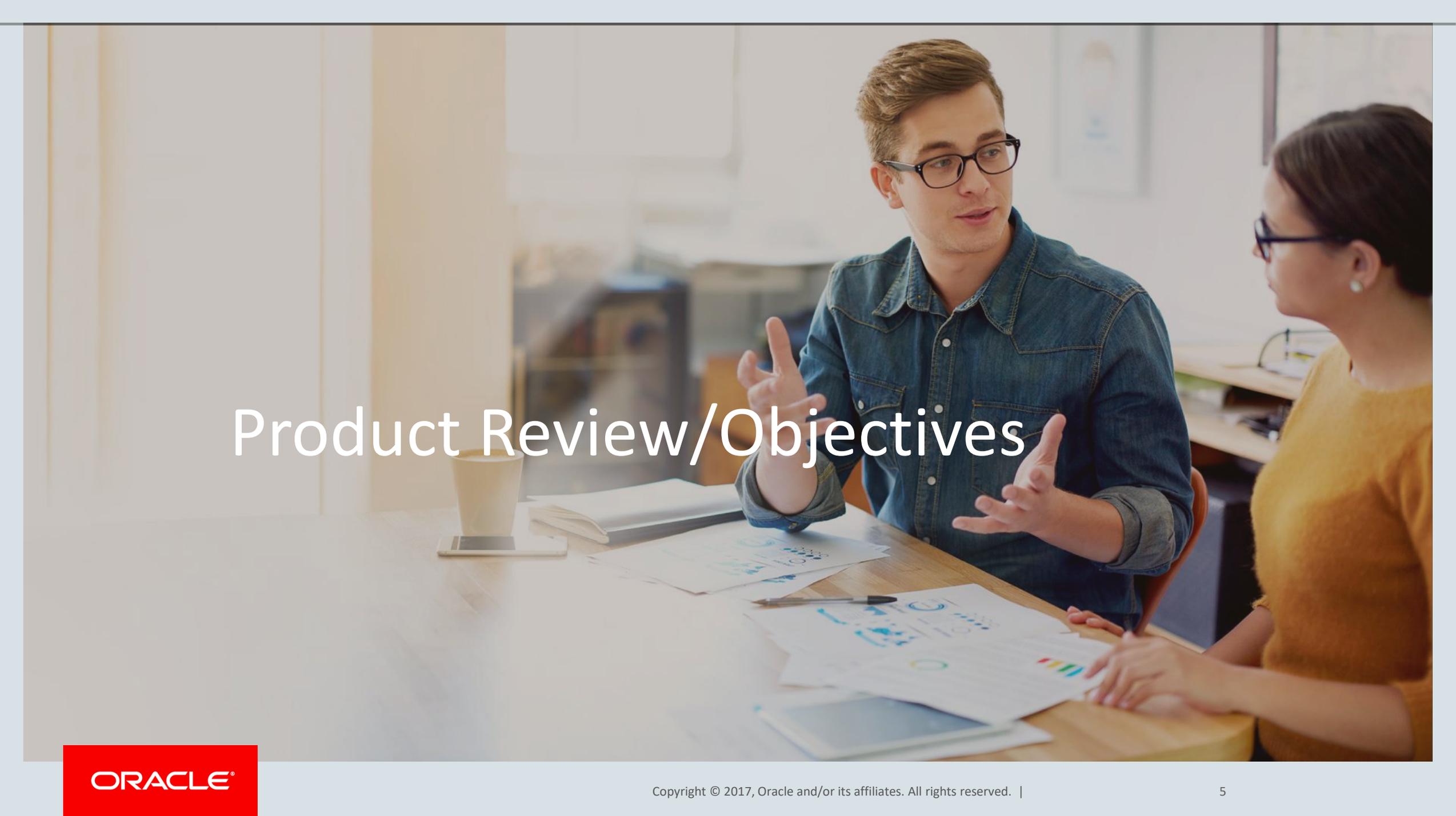


Safe Harbor Statement

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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 speaking and gesturing with his hands while sitting at a table. A woman with glasses and a yellow top is listening. On the table are several documents with charts, a coffee cup, and a smartphone. The background is a blurred office setting.

Product Review/Objectives

Certification Documentation

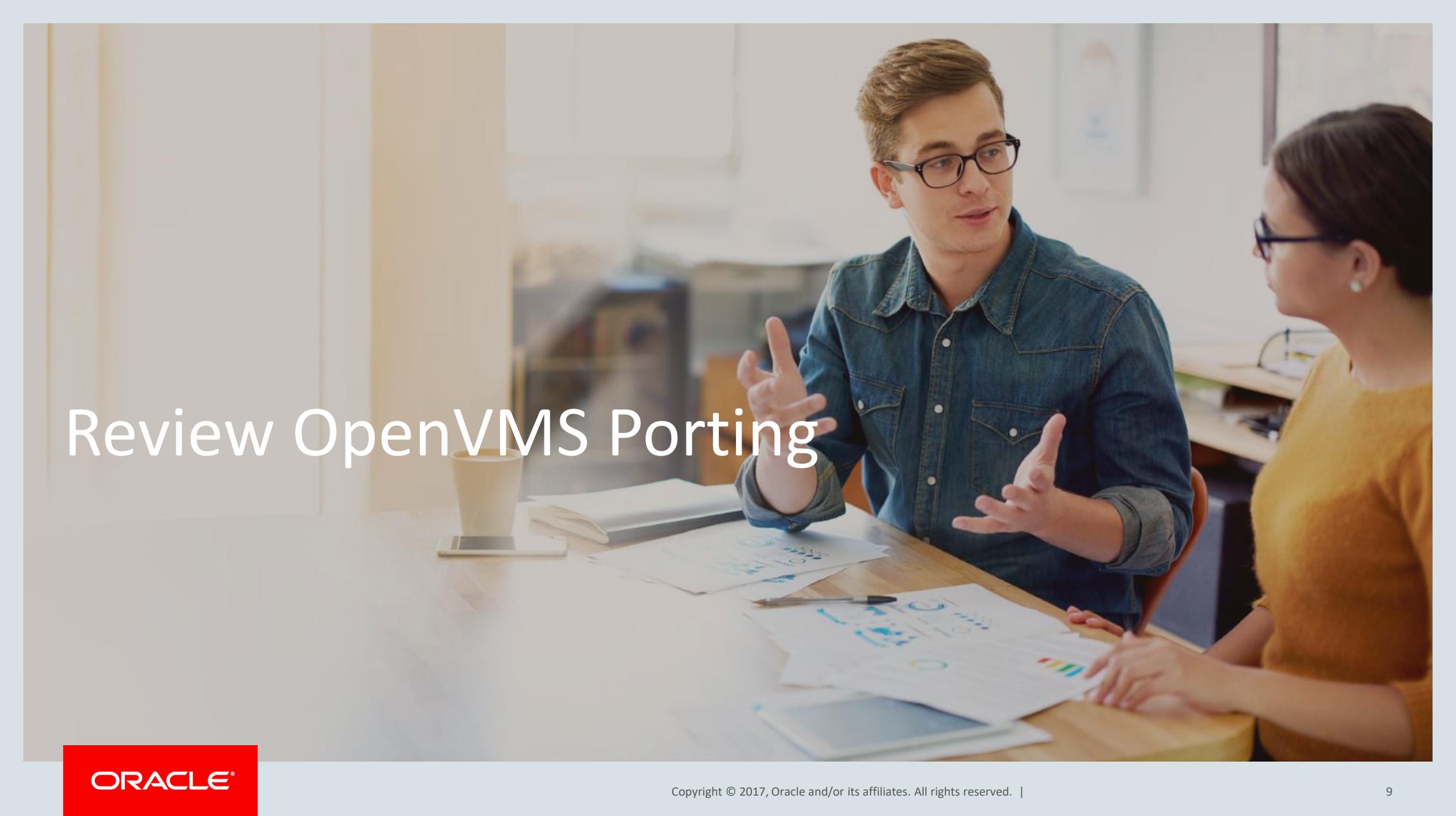
- My Oracle Support (MOS) Document
 - <https://support.oracle.com>
 - **HP Itanium OpenVMS Certification Matrix Doc ID 377470.1**
 - **Note**
 - Please use this document as the current support matrix
 - It is updated frequently
 - This document does not limit Oracle in what will be delivered
 - Primary 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
 - Jan 2019 PSU, Base Patch 28729262: Database Patch Set Update 11.2.0.4.190115
 - Does not include FIPS MES 145
 - Apr 2019 PSU, Base Patch 29141056: Database Patch Set Update 11.2.0.4.190416
 - Does not include FIPS MES 145
- OpenVMS 11.2.0.4 FAQ
 - Reference MOS Note 2012766.1

Note on native OpenVMS Java 1.8

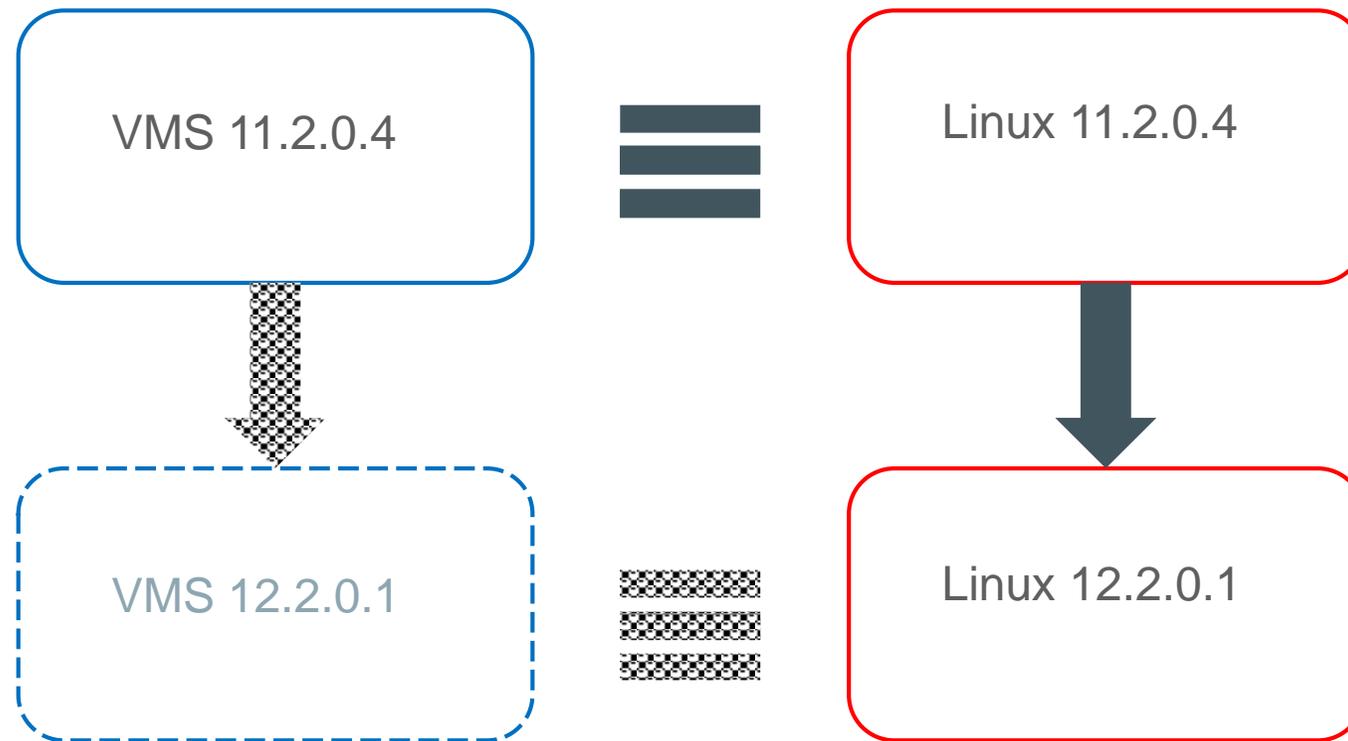
- HPE release notes document that the interface to OpenVMS Java 1.8 is a 64 bit interface.
 - Java 1.4-2, 1.5, 1.6 all had a 32 bit interface
 - Oracle Database on OpenVMS currently supports only a 32 bit interface
 - https://www.hpe.com/global/java/documentation/1.8.0/ivms/docs/release_notes.html
 - 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

A man with glasses and a denim shirt is gesturing while talking to a woman in a yellow top. They are sitting at a table with papers, a coffee cup, and a smartphone. The background shows an office environment with desks and a whiteboard.

Review OpenVMS Porting

Oracle 12c OpenVMS Port Update

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

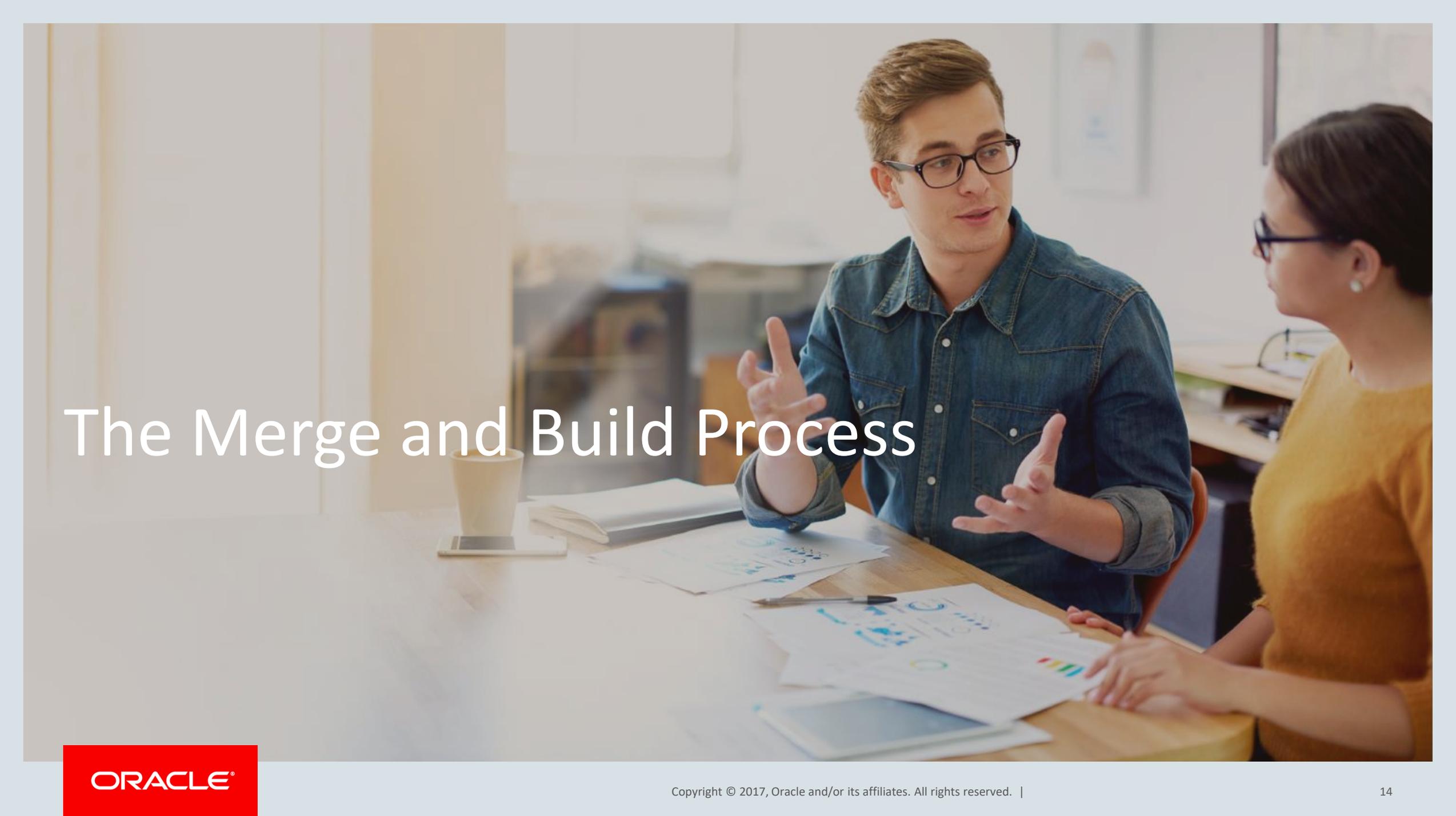
- Total entries in label – 1,708,870
- Files – 1,434,683
- Extensions 17,303

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

Oracle 12c OpenVMS Port Update

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 has given 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 window title is "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 sections:

- Source:** tsldir.tsc@/mjnoel_mjn_foo_test/2 (View-Only). The text includes:

```
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@/stp_db_12.2.0_decvms_gen/1 (View-Only). The text includes:

```
1 #
2 # $Header: oracore3/test/tsldir/src/tsldir.tsc /stp_db_12.2.0
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 #
```
- Result of Merge (Editable):** The merged text includes:

```
1 #
2 #
3 # tsldir.tsc
4 #
5 # Copyright (c) 2010, 2019, Oracle and/or its affiliates. All rights reserved.
6 #
7 # NAME
8 #   tsldir.tsc - Test core SLDIR Execute macro
9 #
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 basen
18 #
19 #
```

At the bottom of the window, a status bar indicates "8 merge conflicts: 5 resolved, 3 unresolved Merge Status : Conflicted".

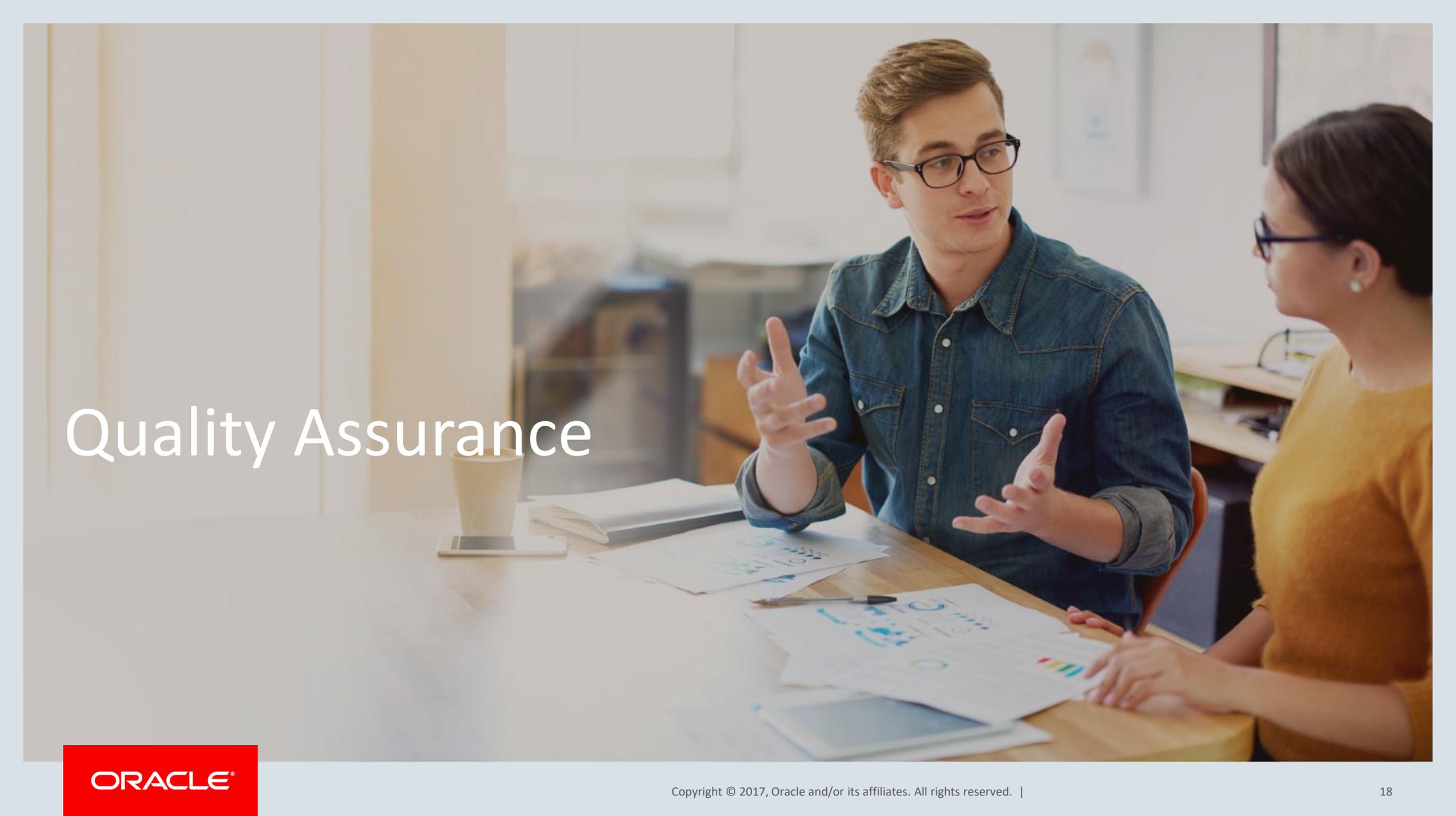
Relationship with VMS Software Inc

- 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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Oracle 12c OpenVMS Port Update 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

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