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Oracle Rdb and Oracle Database on OpenVMS Product Update

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Agenda

- Itanium and VSI Announcements: Impact on Oracle Database on OpenVMS and Oracle Rdb
- Oracle Database on VMS Update
  - Support Dates
  - Currently Supported Versions
  - Versions Under Development
  - Roadmap
- Oracle Rdb Update
  - Support Dates
  - Customer Focus
  - Oracle Rdb Roadmap
  - Oracle Rdb 7.3.1
  - Other Recent Releases

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HP/VSI July 31, 2014 Announcement

- BOLTON, Mass.--(BUSINESS WIRE)--VMS Software, Inc. (VSI) today announced that HP has named it as the sole developer of future versions of the OpenVMS operating system and its layered product components.
- Under the agreement, VSI will license OpenVMS operating system source code from HP to expand the OpenVMS product roadmap, by adding new hardware platform releases, beginning with a new version of OpenVMS for HP Integrity i4 servers based on Poulson, Intel® Itanium® Processor 9500 Series (rx2800i4, BL8xxi4). In the future, VSI will support other hardware platforms, including X86-based servers.

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Oracle's Lifetime Support Policy

- **Oracle Premier Support** provides customers with maintenance and support of Oracle software on Itanium servers for five years from the general availability date of the software release.
- **Oracle Extended Support** provides customers with an extra three years of support for specific Oracle releases for an additional fee. Customers benefit from the same quality of service received with Oracle Premier Support, with the security of knowing they can migrate their software to a new platform when the time is right.
- **Oracle Sustaining Support** customers will receive technical support for as long as they operate their Itanium-based systems—including access to online support tools, knowledge bases, pre-existing fixes and assistance from technical support experts.
- Oracle Lifetime Support

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Oracle Database 10gR2 Support Dates

Integrity Platforms	
Platform	Additional Extended Support: S1 Fixes Only
HP OpenVMS on Integrity	August 2013 – July 2017
HP OpenVMS on Alpha	August 2013 – July 2015
HP-UX	August 2013 – Dec 2015
Linux Integrity	August 2013 – Dec 2015
Windows Integrity	August 2013 – Dec 2015

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10g Itanium Extended Support Fees Now Waived an Additional 2 Years

- See http://www.oracle.com/us/support/library/057419.pdf
  - For customers with current support contracts running Oracle Database 10*gR2 on HP OpenVMS on Itanium, the Extended Support fee will be waived for **five years**; the Extended Support fee will be waived from August 2010 – **July 2015**. For the period of August 2015 – July 2017, Extended Support will continue to be available but will be at then-current Extended Support fees. During this period, Extended Support will be limited to Severity 1 fixes only; critical patch updates will not be made available.*

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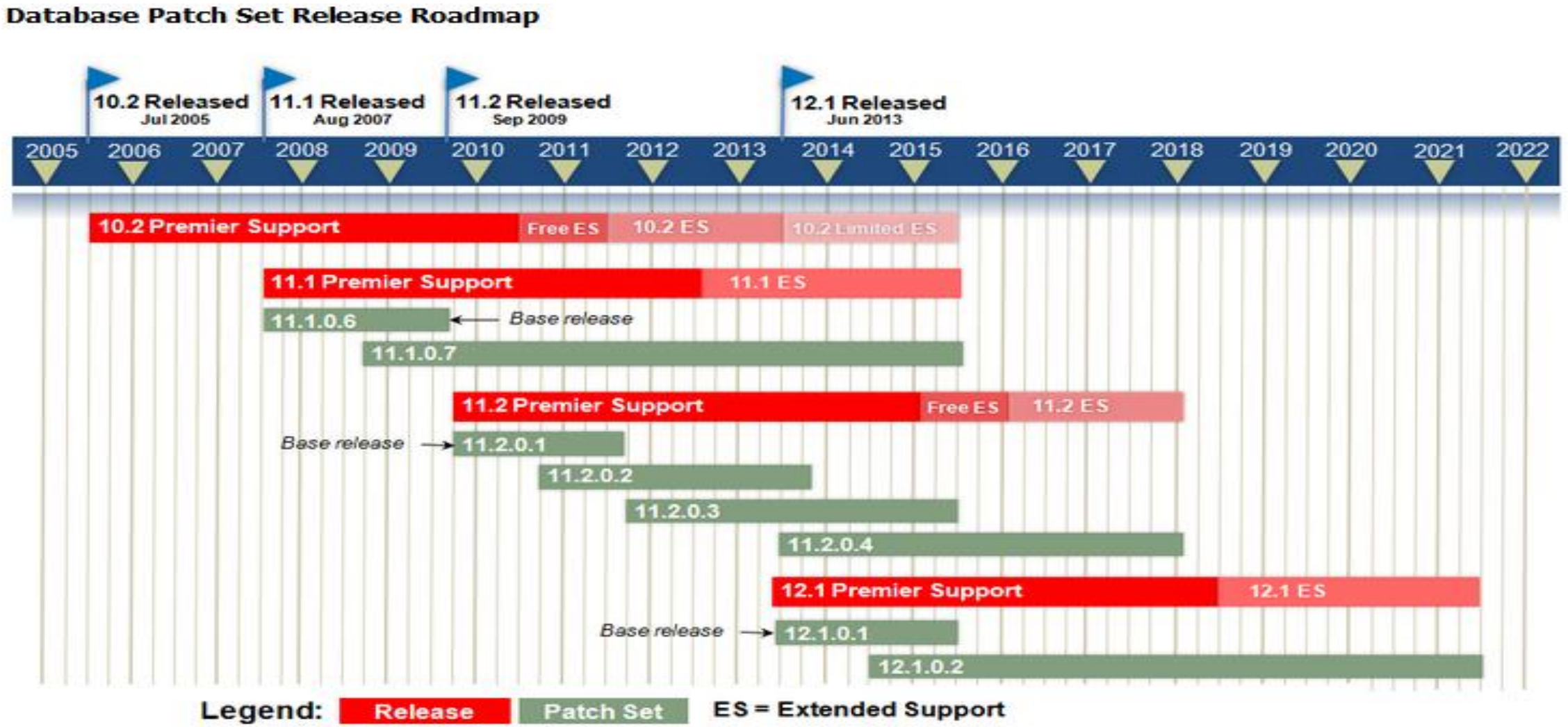
Oracle 11g Support Dates



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Review of Current Products for the Oracle Database on OpenVMS

- 10.2.0.5.0 Released 31-Oct-2012
  - 10.2.0.5.12 PSU available for Alpha & Integrity
- Grid Control Agent
  - 10.2.0.2 Agent for Integrity and Alpha shipping
    - Patch kit 6 is available

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Review of Current Products for Oracle Database on OpenVMS

- 10.2.0.5.0 is a Patch Set
  - Suggest install in a new Oracle home
  - Install initial 10.2.0.2.0 release
    - For Alpha no need to apply any patches
    - For Integrity you should apply the patch 5840282 before applying this patch set
    - No need to install 10.2.0.4.0 before installing 10.2.0.5.0
    - Apply the 10.2.0.5.0 Patch Set
- OpenVMS 8.4 is the minimum OS version for both Alpha and Integrity
- Can be downloaded from My Oracle Support (MOS) – Patch # 8202632

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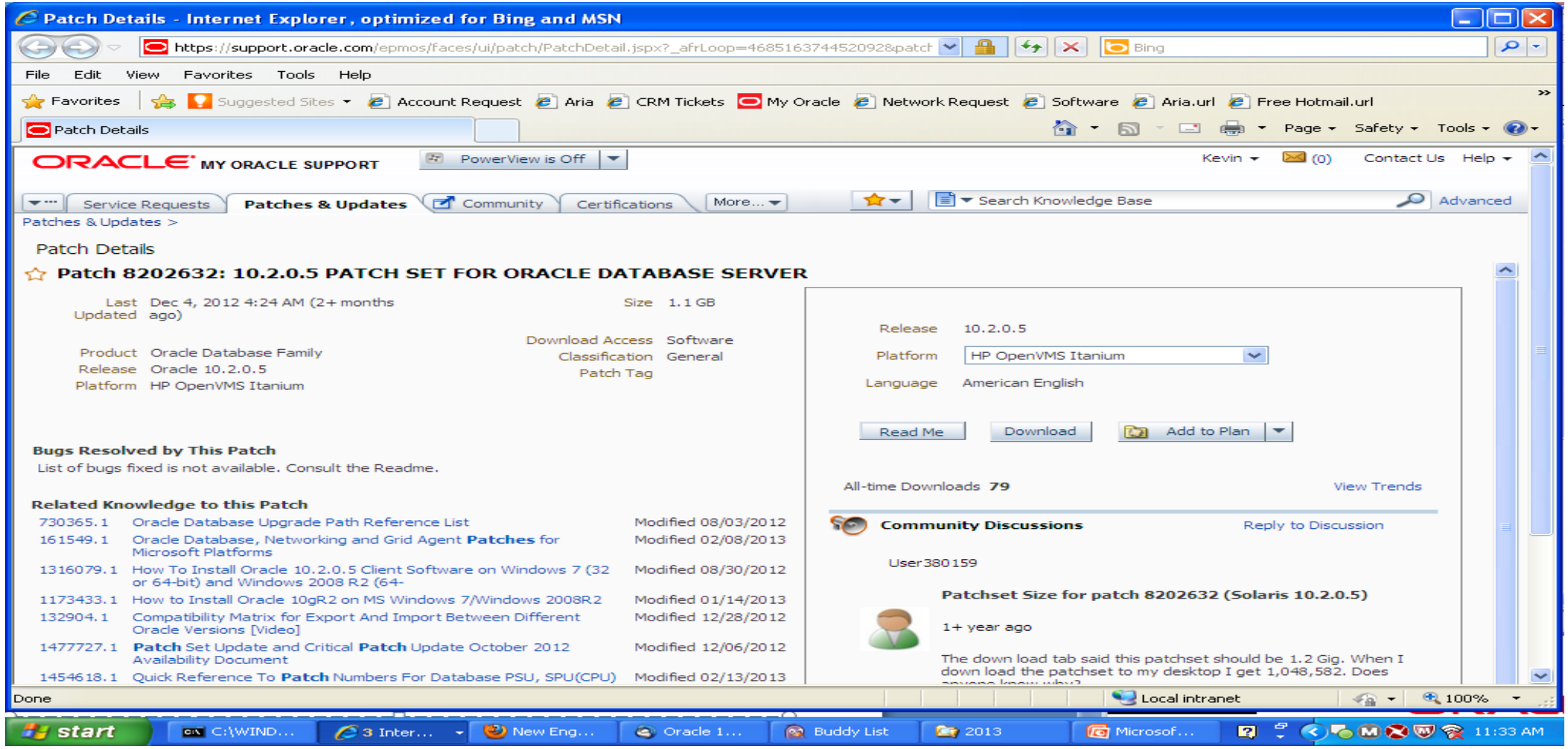
Where to find 10.2.0.5 on My Oracle Support



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Additional Supported Features

- Mixed Architecture RAC – (MAR)
  - Released supporting 10.2.0.4.0
  - 10.2.0.5.0 is supported
    - Both the Alpha and Integrity systems must run the same version of Oracle – matching patches as far as possible.
- Data Vault
  - Released with 10.2.0.4.0
  - Updated with 10.2.0.5.0

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Oracle MySupport OpenVMS Information

- OpenVMS: Master Note for Oracle 10.2 on hp OpenVMS
  - [ID 726914.1]
- OpenVMS: Oracle Release 10gR2 Mixed Architecture (Multi-Home) CRS/RAC Installation on hp Integrity and Alpha
  - [ID 785970.1]
- OpenVMS: Getting started with the 10.2 Grid Control Agent on OpenVMS
  - [ID 739445.1]
- Installing AV Agent 10.2.3.2 on HP OpenVMS
  - [ID 1111278.1]
    - Master Note For Oracle Audit Vault
      - [ID 1199033.1]

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Review of Oracle Database 11gR2

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Oracle Database 11gR2 on OpenVMS

- Will be a full release - Server/Client Kit
  - Web images
    - No instant client
- Will provide new Oracle features to OpenVMS Integrity
  - Note: An incremental set of features will be available for OpenVMS
    - Not all Oracle features will be available on OpenVMS

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OpenVMS 11g Porting Environment (VPE)

- Integrity OpenVMS only planned
- 11gR2 only available for OpenVMS 8.4
  - We use OpenVMS sym-links to create the release
- We are doing labels and builds every two weeks as a default
  - This is including completing core testing
- 40% larger than 10.2.0.5.0

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Status April, 2015

- November 2012 we resumed 11.2.0.2.0
  - Merged all changes from 10.2.0.5.0 release
- Skipped 11.2.0.3.0
- Base Released 11.2.0.4.0 in August 2013
  - We merged to 11.2.0.4.0 label
    - Starting Q3CY2013
    - Three months of work
  - CY2015
    - Operating System Code (OSD) development completed
    - **Short regressions completed!**
    - **Certification LRGs, High Priority LRGs well underway**
    - Long regressions underway

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Status April, 2015 (Cont.)

- 11g Beta1 on OpenVMS released January, 2015 (Non RAC)
- 11g Beta2 on OpenVMS released April, 2015 (Non RAC)

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Status April, 2015 (cont.)

- 11.2.0.4.0 is final Patch Set for the 11.2 code line
  - PSU planned available until at least Jan 2018 See MOS note 742060.1
  - Plan is to release the current PSU approximately the same time as our 11gR2 release
- 5828 files have been branched for OpenVMS
  - 2398 source files
  - 1089 support files
  - 2341 various other
    - .txt .com ,sql ,sqlj .xml {installer files}

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What will an Oracle 11g Client Kit Provide to OpenVMS

- Client/Server Interoperability Support to future database releases
- Standard Supported client tools (next slides)
- Upgraded Security Functionality
- Gives you the ability to continue to run your application on VMS while connecting to the database server platform of your choice (either to a VMS server or to other platforms supported by Oracle).

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Oracle Client / Server Interoperability General Policy

- Oracle's general policy is to test and support each new Oracle release for compatibility with older releases thus:
  - **Test the NEW client to each OLDER server release**
    - where the OLDER release is still covered by **Premier Support** at the time that the NEW version is released.
  - **Test OLDER clients to the NEW server release**
    - where the OLDER release is still covered by **Premier Support** OR is in the first two years of Extended Support.
- Tests between the NEW version and other OLDER releases may be added where Oracle deems it sensible to support interoperability between those releases.

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Client / Server / Interoperability Support Matrix For Different Oracle Versions [ID 207303.1]

Client Version	Server Version					
	12.1.0	11.2.0	11.1.0	10.2.0	10.1.0	9.2.0
12.1.0	Yes	Yes	ES	ES #7	No #3	No #3
11.2.0	Yes	Yes	ES	ES #7	No	Was #5
11.1.0	ES	ES	ES	ES #7	Was #6	Was #5
10.2.0	ES #7	ES #7	ES #7	Was	Was	Was #5
10.1.0(#4)	No	Was #6	Was #6	Was	Was	Was
9.2.0	No#8	Was #5	Was #5	Was #5	Was	Was

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11g Client Kit Contents

- Oracle SQLJ
- Oracle Database Utilities
- Oracle Java Client
- SQL*Plus
- Oracle JDBC/THIN Interfaces
- Oracle Internet Directory Client
- Oracle Call Interface (OCI)
- Oracle Programmer
- Oracle XML Development Kit
- Oracle Advanced Security
- Enterprise Manager Minimal Integration
- OLAP Analytic Workspace Manager and Worksheet
- Oracle Net

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11g Client Kit Contents (cont.)

- Oracle Connection Manager
- Oracle Net Listener
- Oracle Multimedia Client Option
- Oracle ODBC Driver
- Oracle Clusterware High Availability API
- Oracle SQL Developer
- Oracle Scheduler Agent
- Oracle Services For Microsoft Transaction Server
- Oracle Administration Assistant for Windows
- Oracle Counters for Windows Performance Monitor
- Oracle Objects for OLE
- Oracle Provider for OLE DB
- Oracle Data Provider for .NET
- Oracle Providers for ASP.NET

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Oracle Rdb Update

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Rdb Product Family Lifetime Support Dates

	General Availability	Premier Support Ends	Extended Support Ends	Sustaining Support Ends
Rdb 7.0	Oct 1996	Aug 2007	Aug 2009	Indefinite
Rdb 7.1	Jul 2001	Dec 2007	Dec 2010	Indefinite
Rdb 7.2	Jan 2006	Jul 2015	Jul 2017	Indefinite
Rdb 7.3	Mar 2011	Sep 2018	Sep 2021	Indefinite

See: http://www.oracle.com/us/support/library/lifetime-support-technology-069183.pdf

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Rdb Product Family Releases Since March, 2011

- **Rdb 7.2.5.6, April 2015**
- **Rdb 7.3.1.2, October, 2014**
- **ODBC 3.3.2.4, October, 2014**
- **Oracle Rdb JDBC 7.3.3.1, August 2014**
- **ORCM 7.3.0, June, 2014**
- **Rdb 7.2.5.5, June, 2014**
- **Oracle Rdb JDBC 7.3.3, May 2014**
- **ORDT 7.3.3, May, 2014**
- **Rdb 7.3.1.1, February, 2014**
- **Rdb 7.2.5.4, February, 2014**
- CODASYL DBMS 7.3.1, November, 2013
- SQL/Services 7.3.2, October, 2013
- CDD/Repository 7.2.0.4, October, 2013
- Rdb 7.3.1, September, 2013
- Rdb 7.2.5.3, July, 2013
- Oracle Rdb JDBC 7.3.2, April, 2013
- Rdb 7.2.5.2 Update 3, April, 2013
- Rdb 7.2.5.2 Update 2, February, 2013
- Rdb 7.2.5.2 Update 1, November, 2012
- Rdb 7.2.5.2, July, 2012
- Rdb 7.2.5.1, March, 2012
- Rdb 7.2.5, June, 2011
- CODASYL DBMS 7.2.5, July, 2011
- SQL/Services /OCI Services 7.3.1.1, May, 2012
- Oracle Rdb JDBC 7.3.1, March, 2012
- Oracle Rdb JDBC 7.3.0.2 September, 2011
- ORDP.NET 7.3.2.2, May, 2012
- ORDP.NET 7.3.2.1, Sep, 2011
- ORDP.NET 7.3.2.0, May, 2011
- ODBC 3.3.2.3, April, 2012
- ODBC 3.3.2.2, November, 2011

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Rdb Marketing Focus

- Focus on meeting our customers' needs
- Rdb Web page, Rdb Web Journal, MetaLink, OTN
- Rdb management personal customer visits /meetings
- Events
  - Oracle OpenWorld
  - HP Events
  - OpenVMS SIG Groups

- **Technical Forums (2015) * Tentative**
  - Nashua, NH USA, October 1-2
  - Redwood Shores, CA, USA, Oct 5-6
  - Stockholm, Sweden, October 12-13
  - Vienna, Austria, October 15-16
  - Utrecht, NL, October 19-20
  - London, UK, October 22-23
  - Paris, France, October 26-27
  - Sydney, Australia, December 1-2

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Rdb 7.3.1, September 2013

- The kit is available on My Oracle Support
  as patch set numbers 17482084 (Itanium kit) and 17482096 (Alpha kit)
- **Also available on Oracle Software Data Cloud (OSDC) and E-Delivery as of April, 2015**
- Note that there is no longer an ‘unoptimized’ Alpha kit. For example in 7.2 Alpha we have:

  7.2.5.3.0 (not optimized for EV56 or higher)

  7.2.5.3.1 (optimized for EV56 or higher)

  In 7.3 Alpha we only have:

  7.3.1.0.1 (optimized for EV56 or higher)

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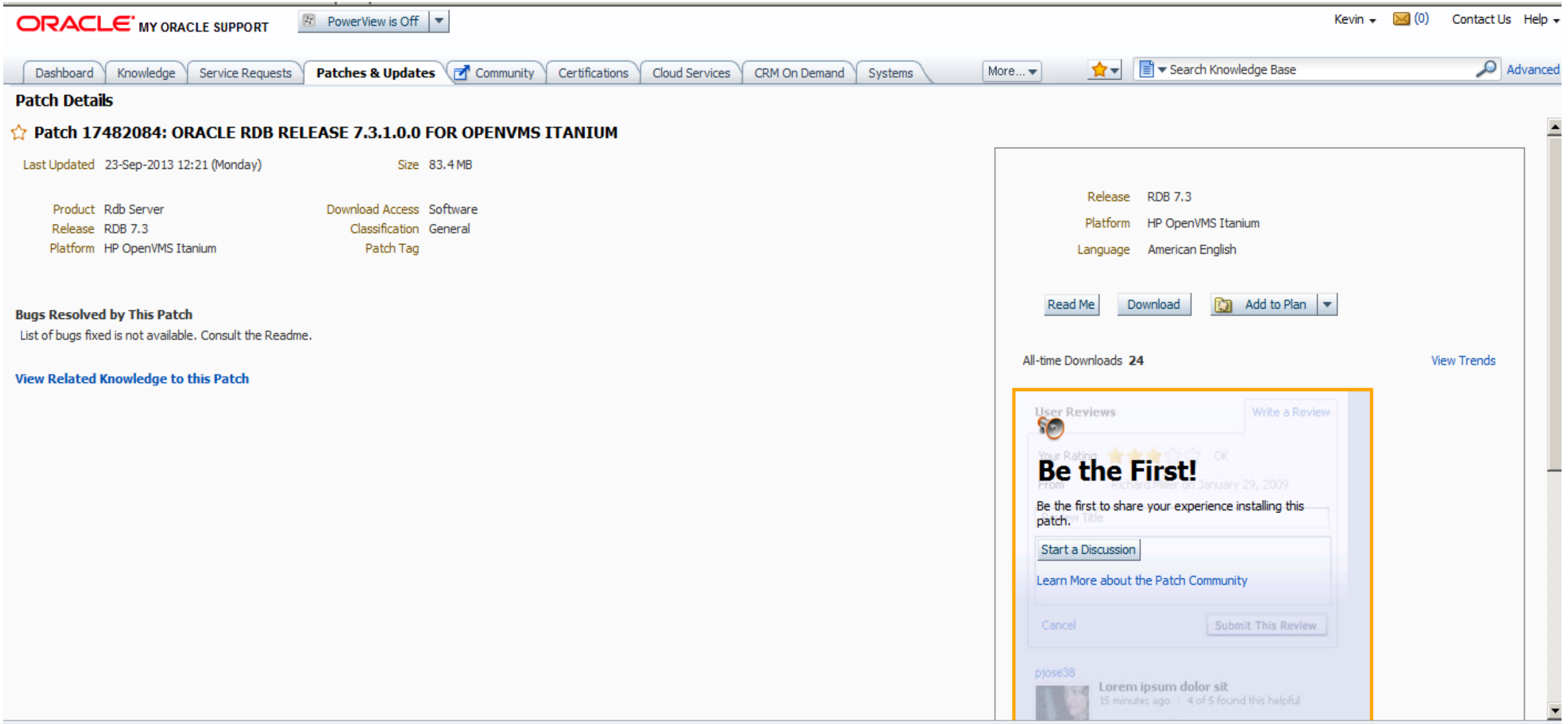
Rdb 7.3.1 on My Oracle Support



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Rdb 7.3.1 New Features and Enhancements

- New /ERROR_LIMIT Qualifier Added as the Default to RMU/VERIFY
- RMU /VERIFY Root Displays the Corrupt Page Table Entries
- DECLARE LOCAL TEMPORARY TABLE Supports COMMENT IS Clause
- Temporary Tables Now Support LARGE MEMORY Option
- COUNT Now Returns BIGINT Result
- Aggregate Functions Now Use BIGINT Counters
- /[NO]KEY_VALUES Qualifier Added to RMU/VERIFY/INDEX
- The /LOCK_TIMEOUT Qualifier Now Allows the Database Default
- Compression of AIJ Backup Files for Automatic AIJ Backups
- Global Statistics Sections for Better Performance
- RMU/SET AUDIT Supports Wildcard Table and Column Names
- RMU/BACKUP Database Root Verification Performance Enhancement
- RMU /UNLOAD /AFTER_JOURNAL New Qualifier /DELETES_FIRST
- Add Option to Pass Values to /CONFIRM During RESTORE Operation
- Table Names Can Now Be Specified For Index Verification
- New RMU/VERIFY Feature to Detect Orphan Hash Index Buckets

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Rdb 7.3.1 New Features and Enhancements

- New COMPILE Clause for ALTER TRIGGER Statement
- New COMPILE ALL TRIGGERS Clause for ALTER TABLE Statement
- New RETRY Clause for ACCEPT Statement
- New Character Sets ISOLATIN2 and WIN_LATIN2 Supported
- Changes and Enhancements to Trigger Support
- New RMU BACKUP RBF File BRHK_ROOT1, BRHK_ROOT2, BRH$K_ROOT3 Records /kroot_records
- New Functions NUMTODSINTERVAL, NUMTOYMINTERVAL Supported
- RMU Dump Audit Command
- New BIN_TO_NUM Numeric Function
- RMU /PROGRESS_REPORT and Control-T for RMU Backup and Restore
- /[NO]SNAPSHOTS, /[NO]DATA_FILE Added to RMU/MOVE_AREA
- Enhancements for Compression Support in SQL EXPORT DATABASE Command
- /[NO]PARTITIONS Qualifier Added to RMU/ANALYZE/INDEXES
- /[NO]PARTITIONS Qualifier Added to RMU/ANALYZE Storage Statistics
- /[NO]PARTITIONS Qualifier Added to RMU/ANALYZE/PLACEMENT
- New RMU/[NO]ASSIST Qualifier for Commands Using Tape Drives

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Rdb 7.3.1 New Features and Enhancements

- New RMU/ALTER Feature to Modify the Area Header Root File Specification
- REVERSE Index
- Support for New Syntax for Sequence Generator Statements
- RMU/SET AUDIT Supports MODULE, ROUTINE, SEQUENCE and VIEW
- RMU/SHOW AUDIT Supports MODULE, ROUTINE, SEQUENCE and VIEW
- SQL Now Supports SQL Standard Syntax for SET CONSTRAINTS ALL Statement
- Support ANSI and ISO SQL Standard Length Units
- New SET FLAGS Clause Supported by CREATE and ALTER PROFILE
- New Support for SAVEPOINT Syntax and Semantics
- SAVEPOINT Statement
- RELEASE SAVEPOINT Statement
- ROLLBACK TO SAVEPOINT Statement
- New OPTIMIZE OUTLINE Clause Allows Outline Specification
- RMU/DUMP/HEADER=ROW_CACHE Now Displays Whether Row Cache is Enabled
- RMU/LOAD Now Supports CSV Formatted Files
- RMU/UNLOAD Now Supports CSV Formatted Files
- RMU/UNLOAD Supports BITMAPPED_SCAN Optimize Option

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Rdb 7.3.1 New Features and Enhancements

- New EDIT STRING Clause for CREATE FUNCTION and CREATE MODULE Functions
- Changes to RMU/VERIFY/CONSTRAINTS and ALTER TABLE Statement
- New SQRT Numeric Function
- New MOD Numeric Function
- New Data Types BINARY and BINARY VARYING
- PERSONA SUPPORT is Enabled For All New Databases
- New Dialects Support in SQL
- New WITH Clause Provides Subquery Factoring
- New MEMORY ALLOCATION Clause for the GLOBAL BUFFERS Definition
- DECLARE LOCAL TEMPORARY VIEW Statement
- Enhancements for Buffered Read Support in SQL EXPORT DATABASE Command
- New BITMAPPED SCAN Clauses Added to OPTIMIZE Clause
- New Support for Allocations Specified Using Quantified Numeric Literal
- New SQL Functions Added
- Changes and Improvements to the Rdb Optimizer and Query Compiler
- Optimized NOT NULL Constraint Execution
- New RMU/LOAD Option CHARACTER_ENCODING_XML
- New REPLACE Statement

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Oracle Rdb V7.3.1.1 February, 2014

- **New Features**
  - New LIMIT_TO Qualifier Added to RMU Load Command
  - New BEFORE and SINCE Qualifiers Added to RMU Load Audit
  - New RMU/SHOW/STATISTICS Output File Periodic Buffer Flushes
  - New Error and Log Messages Added for Segmented String Verification
- **Bug Fixes (partial list)**
  - RMU/CONVERT/ROLLBACK From V7.3 May Prevent Access to Some Tables
  - Memory Leak Possible When Using BITMAPPED SCAN Queries
  - Bugcheck at DIOFETCH$FETCH_SNAP_SEG

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Oracle Rdb V7.3.1.2, October, 2014

- **New Features (partial list)**
  - New FULBCKREQ Message Output When a Full Backup is Required
  - SQL Precompiler Now Generates C++ Compatible Intermediate C Source
  - Alter Index Now Supports REVERSE and NOREVERSE Clauses
- **Bug Fixes (partial list)**
  - RMU Convert Leaves After Image Journal SUPPRESSED
  - Ranked Index Bugchecks – PSII2REMOVEDUPBBC & PSII2INSERTDUPBBC
  - Wrong Result From a Nested UNION Query With OR Predicate
  - Unable to Call External Routine When Attached Remotely to a Database

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Oracle Rdb V7.2.5

- V 7.2.5.0, June 2011
  - Significant release including many new features
  - Some internal re-structuring for performance
- V 7.2.5.1, March, 2012
  - New Features
    - New RMU Options file to modify the Row Cache Backing Store Directories
    - New RMU/REPAIR option file to initialize database snapshot files
    - Show Statistics enhancements
  - Maintenance

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Oracle Rdb V7.2.5.2

- V 7.2.5.2, July, 2012
  - New Prefix Added to Logical Name Created by the Log Recovery Server
    - Now a prefix has been added to this logical name to identify it as being created by the Rdb or DBMS LRS server when database replication is started. The new prefix for this logical name is "RDM$LRS" for Rdb.
  - New data values added to the following Information Tables:
    - RDB$CACHES
    - RDB$DATABASE_ROOT
    - RDB$DATABASE_JOURNAL
  - Maintenance
    - e.g Wrong results for some zig-zag match queries

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Oracle Rdb V7.2.5.2 (Update 1), November, 2012

- **Corrupt SORTED RANKED Index After Row INSERT**
  - In rare cases an INSERT or UPDATE of a SORTED RANKED index can leave the index incomplete. The reported problem was caused by a cascading node split upon an INSERT. That is, an INSERT caused the node to split and that action caused the parent node to split, and so on up the index. The subsequent verify of the index using RMU/VERIFY/INDEX/DATA reported the missing key values which shows that a subtree of the index was not correctly incorporated into the index tree.

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Oracle Rdb V7.2.5.2 (Update 2), February, 2013

- **Session Crash if Run Time Routine Native Compiler Enabled**
  - When using the "Just-in-Time" native compiler for Itanium systems (SET FLAGS 'CODE_OPTIMIZATION(2)'), which is the default, in some instances where a large (greater than 8K) code routine is generated, a stack corruption could occur resulting in the current process being deleted. A large arithmetic expression involving float values is one way to possibly cause the problem.

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Oracle Rdb V7.2.5.2 (Update 2), February, 2013 (cont.)

- **Unexpected RDMS-E-SEQNEXTS Error Reported When GRANT or REVOKE is Used on View**
  - Starting with Oracle Rdb Release 7.2.5.1, GRANT and REVOKE statements on tables with IDENTITY columns propagate these actions to the associated sequence that implements the IDENTITY for the table. Unfortunately, some nested view definitions are erroneously flagged as having identity sequences (these are actually reflections of the base table reference) and GRANT or REVOKE statements may fail

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Oracle Rdb V7.2.5.2 (Update 3), April, 2013

- **Encrypted Parallel Backup Files Could Not Be Restored Or Dumped**
  - Encrypted parallel backup RBF files could not be restored or dumped because of an RMU/RESTORE and RMU/DUMP/BACKUP problem decrypting encrypted backup files created by a parallel backup of an Oracle Rdb database. The backup files were encrypted correctly. The problem was only with the decryption of the database backup files produced by a parallel backup.
  - To allow encrypted backup files produced by parallel backups in previous versions of RDB to be correctly decrypted, a new PARALLEL_BACKUP option has been added to the existing /ENCRYPT qualifier options that can only be used with the RMU/RESTORE and RMU/DUMP/BACKUP commands. This new option cannot be negated.

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Oracle Rdb V7.2.5.2 (Update 3), April, 2013 (cont.)

- **Unexpected Bugcheck During Query Execution at RDMS$$SET_USED_OR_DESCENDANTS**
  - In some cases, a query might bugcheck when processing a subselect within a DISTINCT aggregation.
- **Wrong Result When Constant Boolean Appears in Predicate**
  - In prior releases of Oracle Rdb, it was possible that queries using a predicate containing only literal values would produce the wrong results.

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Oracle Rdb V7.2.5.3, July, 2013

- **New Features**
  - SQL Now Supports SQL Standard Syntax for SET CONSTRAINTS ALL
  - New RMU/DUMP/BACKUP Enhanced Error Handling Features
  - RMU/DUMP/BACKUP Now Dumps Plan File Parameters for Parallel Backups
- **Bug Fixes (partial list)**
  - Rows Returned in the Wrong Order From Sorted Tactic During Bitmapped Scan
  - Corrupt SORTED RANKED Index After Row INSERT
  - ACCVIO In COSI_MEM_GET_VM64_2

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Oracle Rdb V7.2.5.4, February, 2014

- **New Features**
  - SQL Now Supports SQL Standard Syntax for SET CONSTRAINTS ALL
  - New RMU/DUMP/BACKUP Enhanced Error Handling Features
  - RMU/DUMP/BACKUP Now Dumps Plan File Parameters for Parallel Backups
- **Bug Fixes (partial list)**
  - Memory Leak Corrected in Queries That Use Sorting
  - Ranked Index Bugchecks – PSII2REMOVEDUPBBC & PSII2INSERTDUPBBC
  - Using BEGIN/END Around Set Transaction Leads to Memory Leak
  - Bugcheck at DIOFETCH$FETCH_SNAP_SEG

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Oracle Rdb V7.2.5.5, June, 2014

- **New Features**
  - New FULBCKREQ Message Output When a Full Backup is Required
  - RMU Extract Now Extracts SYS_GET_DIAGNOSTIC Function
- **Bug Fixes (partial list)**
  - Memory Leak Possible When Using BITMAPPED SCAN Queries
  - Dialect SQL99 Does Not Use Max Key Lookup
  - Wrong Result From a Nested UNION Query With OR Predicate
  - nexpected Zero Result From COUNT Aggregate
  - Inner Join Query With NOT LIKE Predicate Slows Down
  - Unable to Call External Routine When Attached Remotely to a Database

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Oracle Rdb V7.2.5.6, April, 2015

- **New Features**
  - Comma Statement Separator Now Deprecated
    - Oracle recommends that any scripts or applications that include the CREATE TRIGGER statement be modified to use only the semicolon (;) as a separator.
- **Bug Fixes (partial list)**
  - RDMDBRBUG Bugcheck atb RUJUTL$BIJBL_GET_FORWARD + 1E0
    - The database will shutdown all users., however, the next database attach will cause another DBR process to start.
  - Query With Aggregate Bugchecks Using Match Strategy
  - OpenVMS Privileges Now Used as Override for External Routines
  - Excessive Page Faulting of Query Using QSORT
  - RMU/SHOW STATISTICS Playback Zeroed Final Transaction Duration Screen

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Major Rdb 7.3 Features Planned for Future Versions

- Memory Protection
- Database Vault
- Database Encryption
- TCP/IP Proxy Support
- LDAP

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Database Vault

- Changes the way Rdb handles OpenVMS privileges
- `ALTER DATABASE …`
  `DATABASE VAULT IS ENABLED;`
- Requires SECURITY privilege to enable
- No longer inherit overrides from current system user
- *WARNING* Ensure there is a SECURITY user defined in the database because once DATABASE VAULT is enabled you can not use a OpenVMS privilege to change it externally

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Encryption

- Customer Demand for PCI-DSS Compliance
  - Standard Defined by the PCI Security Council
  - Founding Members are: American Express, Discover, JCB International, MasterCard, Visa
- Design and Implementation Guided By Oracle 10g & 11g Transparent Data Encryption (TDE)

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Transparent Data Encryption

- Table data is encrypted at-rest
- New ENCRYPTION USING clause for CREATE STORAGE AREA
- Decryption requires KEY value to be specified by RMU/OPEN
- Key Management
  - Oracle Wallet Manager
  - Middle-Tier Deployment
- Status
  - Prototype running
  - Investigating impact on all database and utility operations

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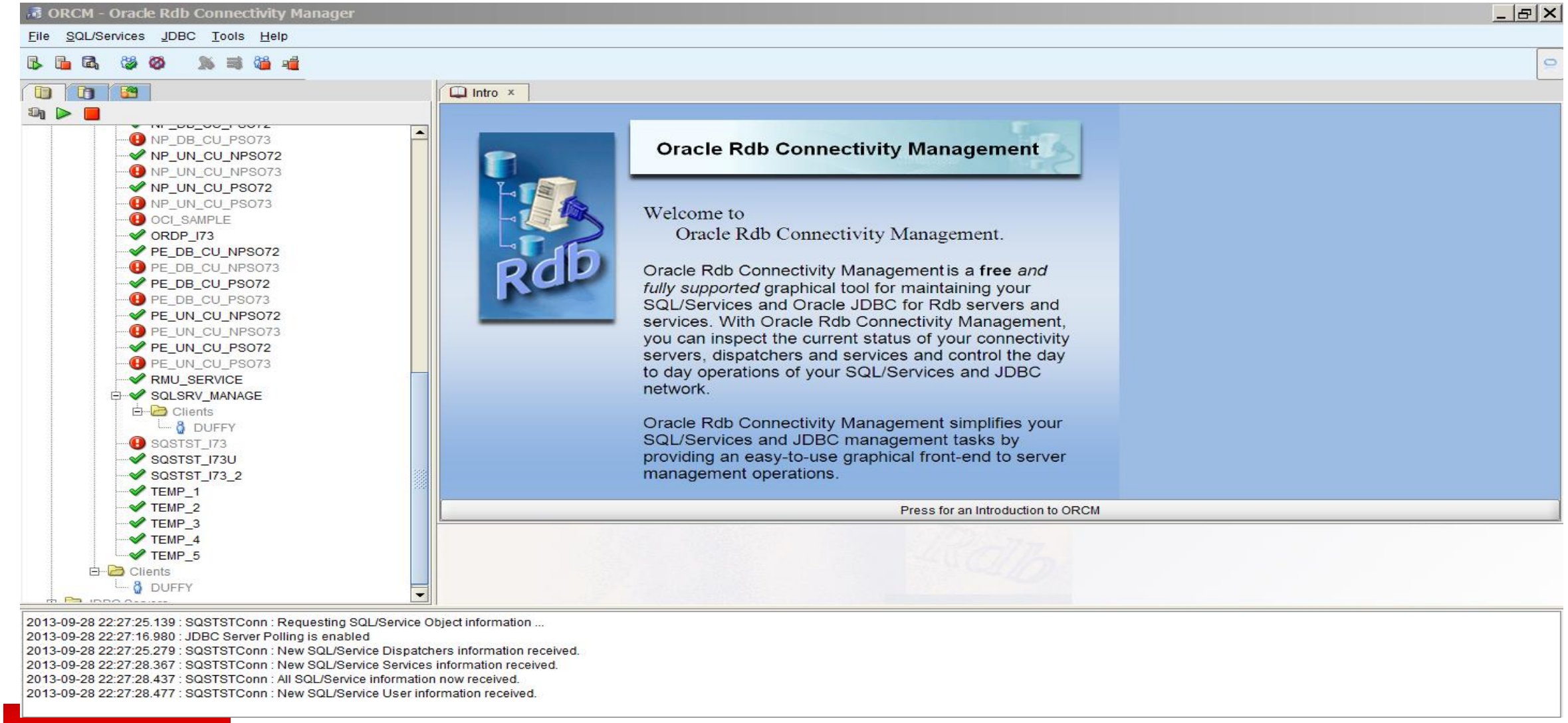
Oracle Rdb Connectivity Management V7.3



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CDD/Repository 7.2.0.4, October, 2013

- New Features
  - Explanations and User Actions Updated
  - Integrate Enhanced to Support New BLR$K_AGG_COUNT Syntax
- Problems Fixed
  - RDB-F-SEGSTR_PARAM Error During Integrate
  - CDO Could Not be Invoked Using SYSMAN
  - CDO Show Version Only Shows Two Digits
  - %PASCAL-E-LNETOOLNG on Compile When Field Comments More Than 255
  - CDD Pathname Versions Truncated on SQL ALTER TABLE
  - Access Violation During Integrate Alter Files
  - Using SQL CREATE After DROP of Object With Same Name Caused ACCVIO
  - Alignment Faults Corrected

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Connectivity: Supported protocols

- Oracle SQL/Services
- OCI Services for Oracle Rdb
- Oracle ODBC Driver for Rdb
- Oracle JDBC for Rdb
- Oracle Rdb Developer Tools for Visual Studio

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SQL/Services 7.3.3, TBD, 2015

- OCI Services for Oracle
  - Oracle 11g Library Support
  - OCI Performance Enhancements
  - Support for LDAP authentication
    - Currently users are defined in the USER$ table
    - We store an encoded password (different encoding to that used by OpenVMS and LDAP servers)
    - This password is used to authenticate with the Oracle server
    - RDB$NATCONN_CUPP Utility used to add, modify, remove, and show users enabled for OCI access and to sync with updated VMS passwords
    - LDAP development underway to fetch this special encoded password
      - Prototype working

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SQL/Services 7.3.2, October, 2013

- OCI Services for Oracle
  - Oracle 10.2.0.5 Library
  - Enhancements to OCI Logging
  - Retries for Preparing or Upgrading a Database
  - Problems Fixed:
    - ALTER SESSION REMOTE_DEPENDENCIES Setting Now Accepted
    - Insert Returning into a Variable
    - Unexpected Read Only Transaction Error

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SQL/Services 7.3.2, October, 2013 (cont.)

- Client API
  - New Oracle SQL/Services Client API Kit for 64-Bit Linux Platforms
  - Updated Oracle SQL/Services Client API Kit for 32-Bit Linux Platforms
  - Updated Oracle SQL/Services Client API Kits for Windows Platforms
  - Desupport of HP Tru64 Unix Platform
  - Updated Guide to Using the Oracle SQL/Services Client API
  - Updated Help For SQL/Services
- SQL Service Problems Fixed
  - Oracle SQL/Services PID Output Now Always Displayed in HEX

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Oracle ODBC Driver for Rdb

- 3.3.2.4, October, 2014
- 3.3.2.3, April, 2012
- 3.3.2.2, November, 2011
- 3.3.2.1, April, 2011
- Supported Windows
  - Windows 32bit
    - Windows 7, XP, Vista, Server 2008, Server 2003, 2000,
  - Windows 64bit
    - Windows 7 XP, XP X64, Vista X64, Server 2008 X64, Server 2003 X64

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Oracle Rdb JDBC Releases

- 7.3.3.2, TBD, 2015
- 7.3.3.1, August, 2014
- 7.3.3, - May, 2014
- 7.3.2 – April, 2013
- 7.3.1, March, 2012
- 7.3.0.2 – September, 2011
- 7.3.0.1 – February, 2011
- 7.3 – February, 2010
- 7.2.5.5 – December 2009
- 7.2.5.4 – September 2009

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Oracle JDBC for Rdb 7.3.3.0, May, 2014

- **New Features**
  - Oracle Rdb PID now Displayed
  - Controller Command Show Executors
  - Extra Timestamp Precision
  - Nlslang Connection Switch
  - Use Query Header as Description
- **Bug Fixes (partial list)**
  - Hang on Connection to Server when using SSL
  - Access Violation in MP Server
  - Executor Initialization Problem
  - Forced Client Termination may Crash Thin Server

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Oracle JDBC for Rdb 7.3.3.1, August, 2014

- **New Features**
  - Change in Template Configuration Filename
    - the copy installed to RDB$JDBC_HOME is renamed to RDBJDBCCFG_TEMPLATE.XML
    - Only the copy in RDB$JDBC_COM is used for production
- **Bugs fixed (partial list)**
  - Severe Performance Degradation in MP Server
  - Server Configuration Deny User not Enforced
  - Server Access Restrictions Ignored
  - Datetime Insertion Issues

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Oracle Rdb Developer Tools for Visual Studio

- 7.3.4, TBD, 2015
  - Support for Entity Framework V6.0/6.1
  - Will include support for Fluent
- 7.3.3, May, 2014
- 7.3.2.2, April, 2012
  - Fixes Entity Framework related connection issues when using SQL/Services for connectivity rather then JDBC
- 7.3.2.1, September, 2011
  - Entity Framework Support
  - Performance
  - Maintenance
- 7.3.1, February, 2009

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Oracle Rdb Developer Tools for Visual Studio V7.3.3, May, 2014

- **New Features**
  - Visual Studio 2005 Integration no Longer Supported
  - Visual Studio 2012 Integration

- **Bug Fixes (partial list)**
  - None

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Training Partner List

- **Europe, Asia, Middle East and Africa**
  - VX Company
    Baarn, The Netherlands
    http://www.vxcompany.com/rdbtrainingcourses
- **Americas**
  - JCC Consulting, Inc.
    Granville, Ohio, United States
    http://www.jcc.com/
- **Oracle CODASYL DBMS Worldwide**
  - Software Concepts International
    Nashua, New Hampshire, United States
    http://www.sciinc.com/

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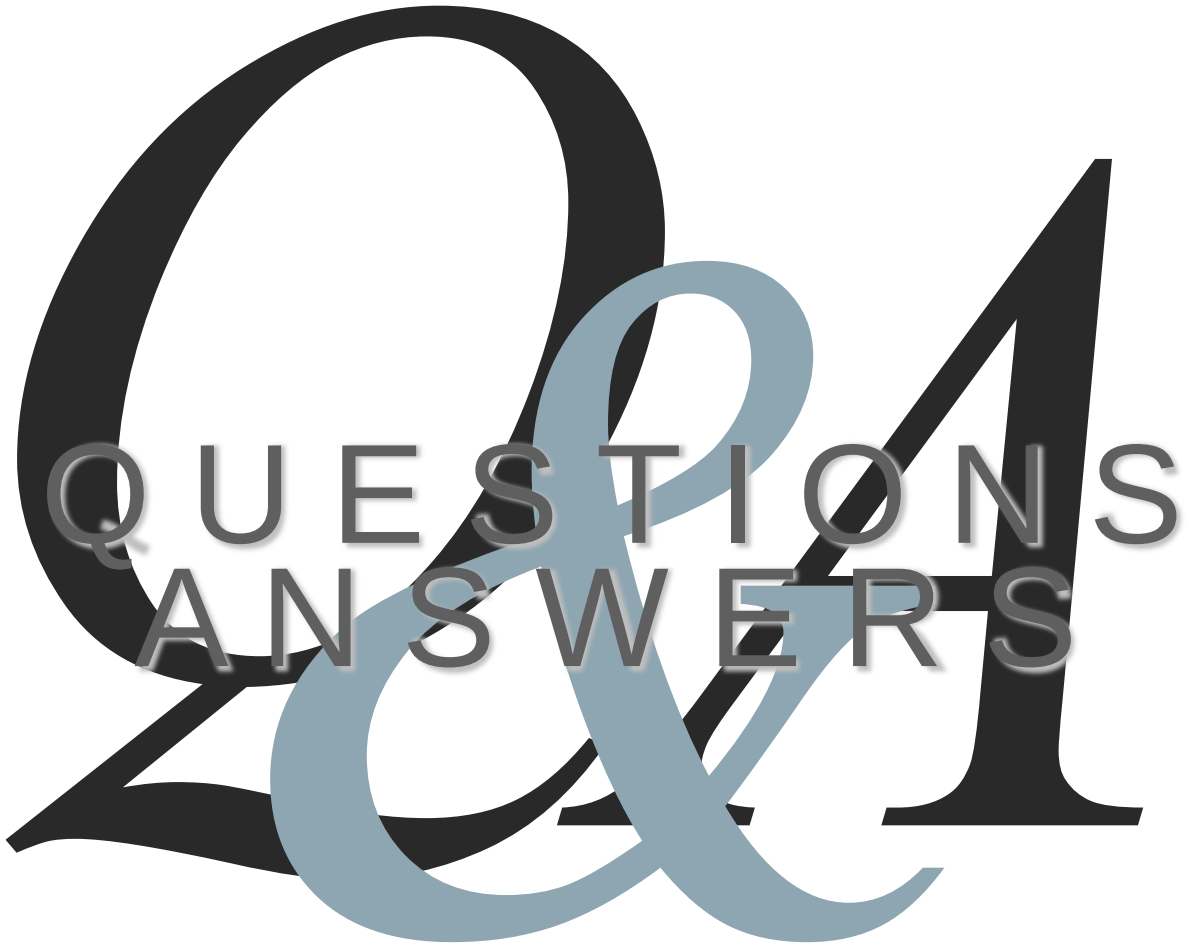

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