Last updated: 08-SEP-2010

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Oracle 11.2 Database Upgrade: Prepare & Plan

Roy Swonger
Database Upgrade & Utilities
ORACLE Corporation

Agenda

- Preparation
  - Support Policy
  - Certification
  - Documentation
  - References
  - Upgrade paths
  - Sanity operations
  - Preparation
- Installation
- Upgrade
- News and Task List
- Diagnostics & Tuning
- Performance Testing
- Best Practices

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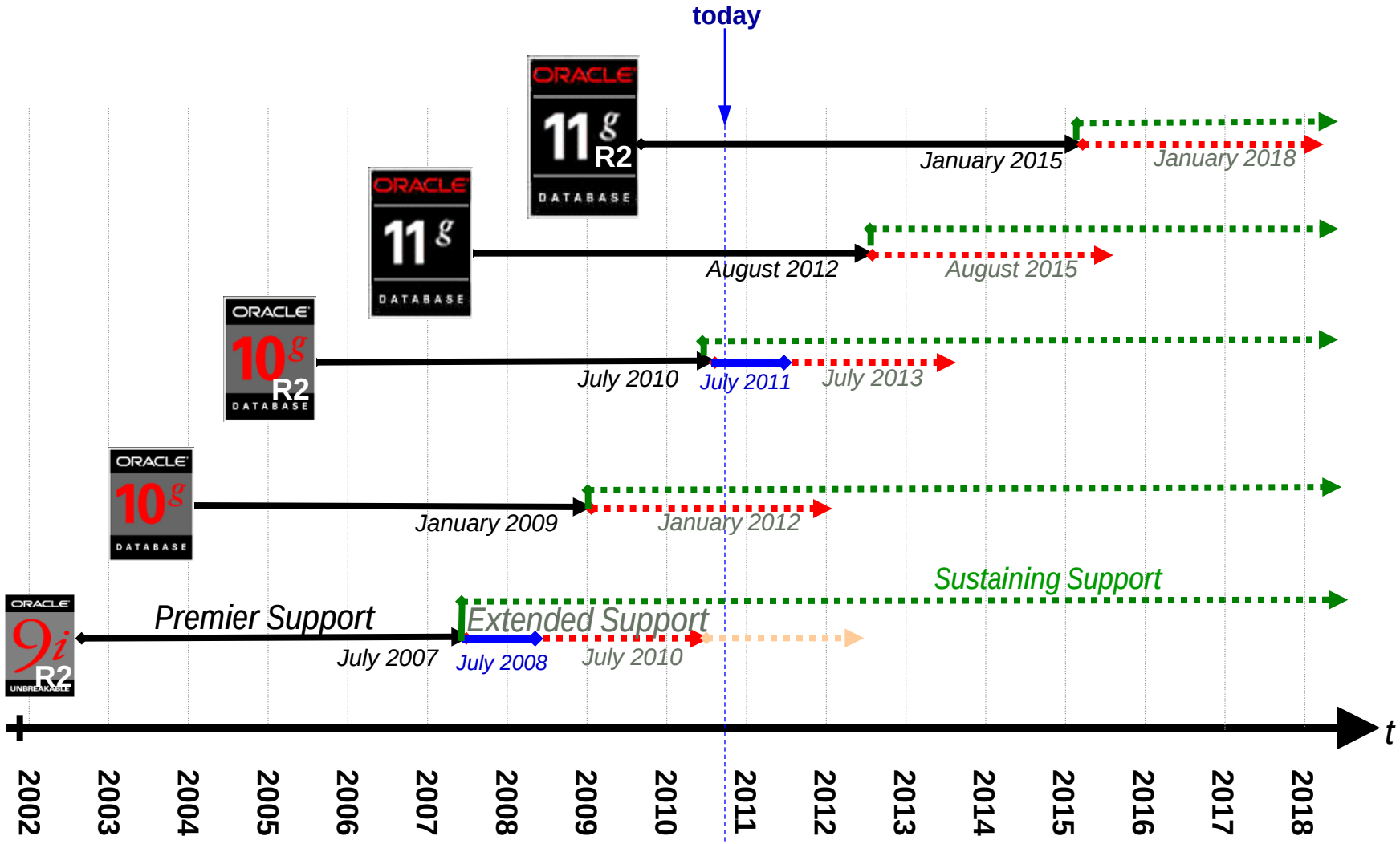
Lifetime Support Policy



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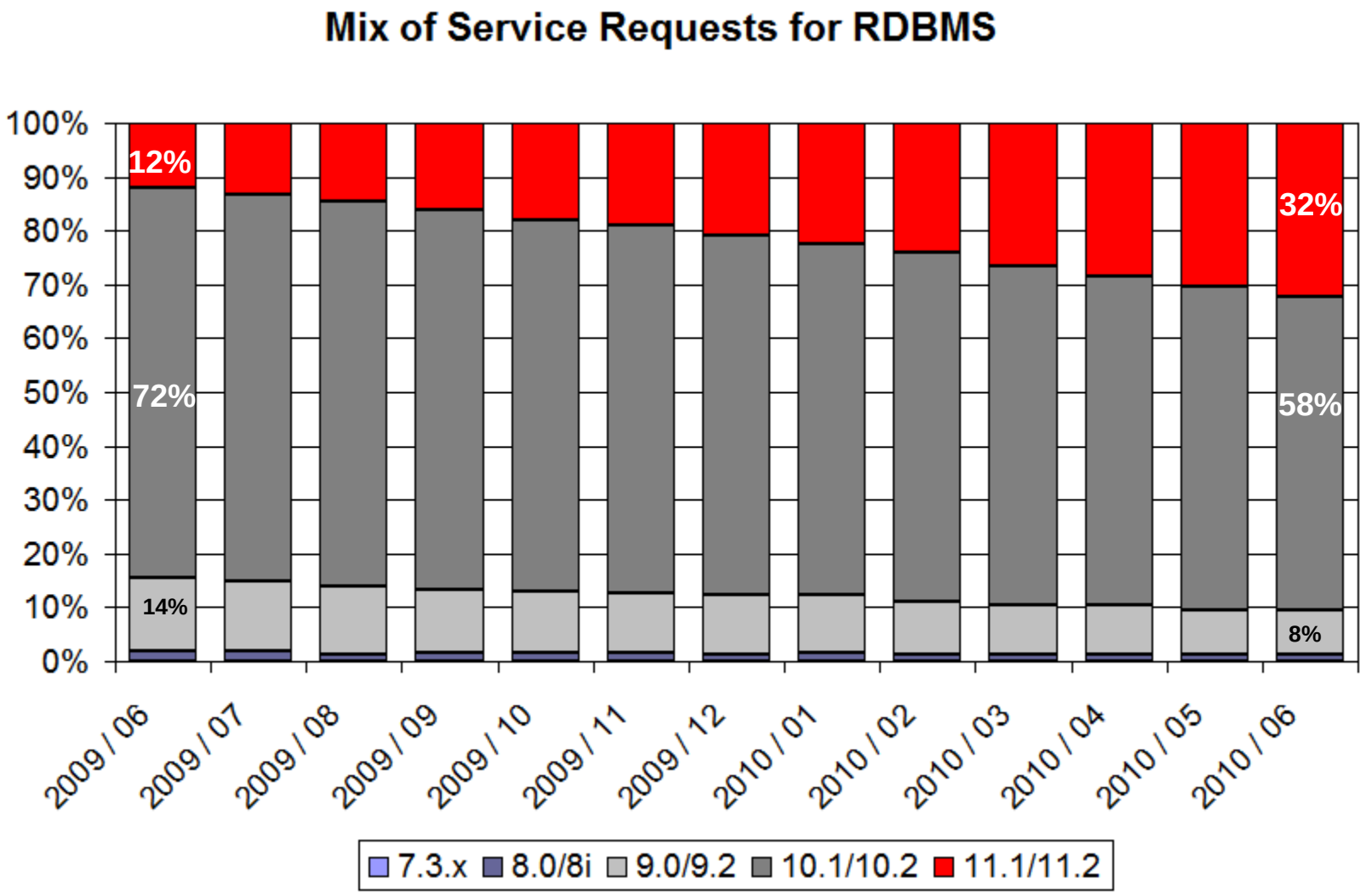
Releases – Support-SRs



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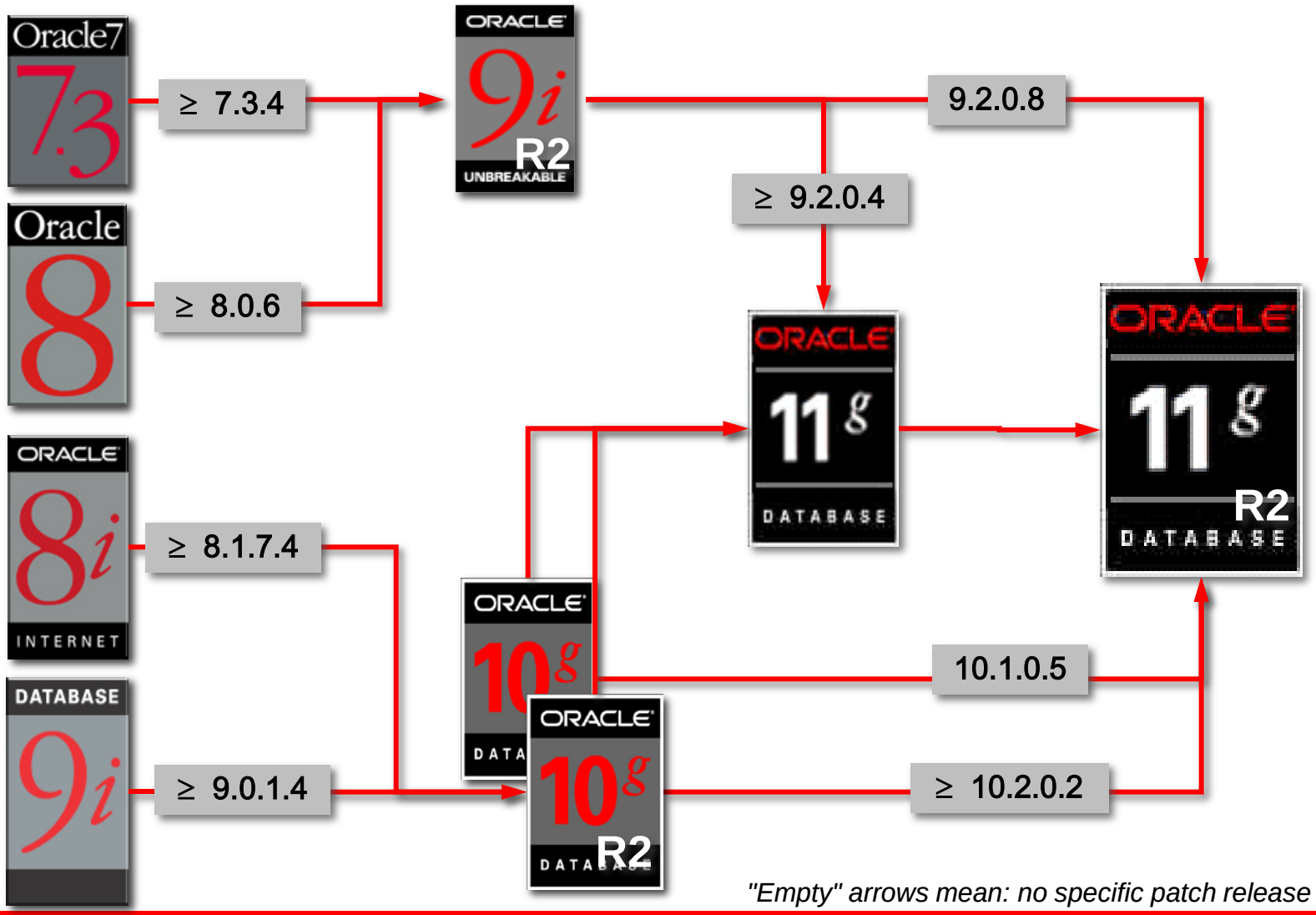
Upgrade to Oracle Database 11*g*



"Empty" arrows mean: no specific patch release required

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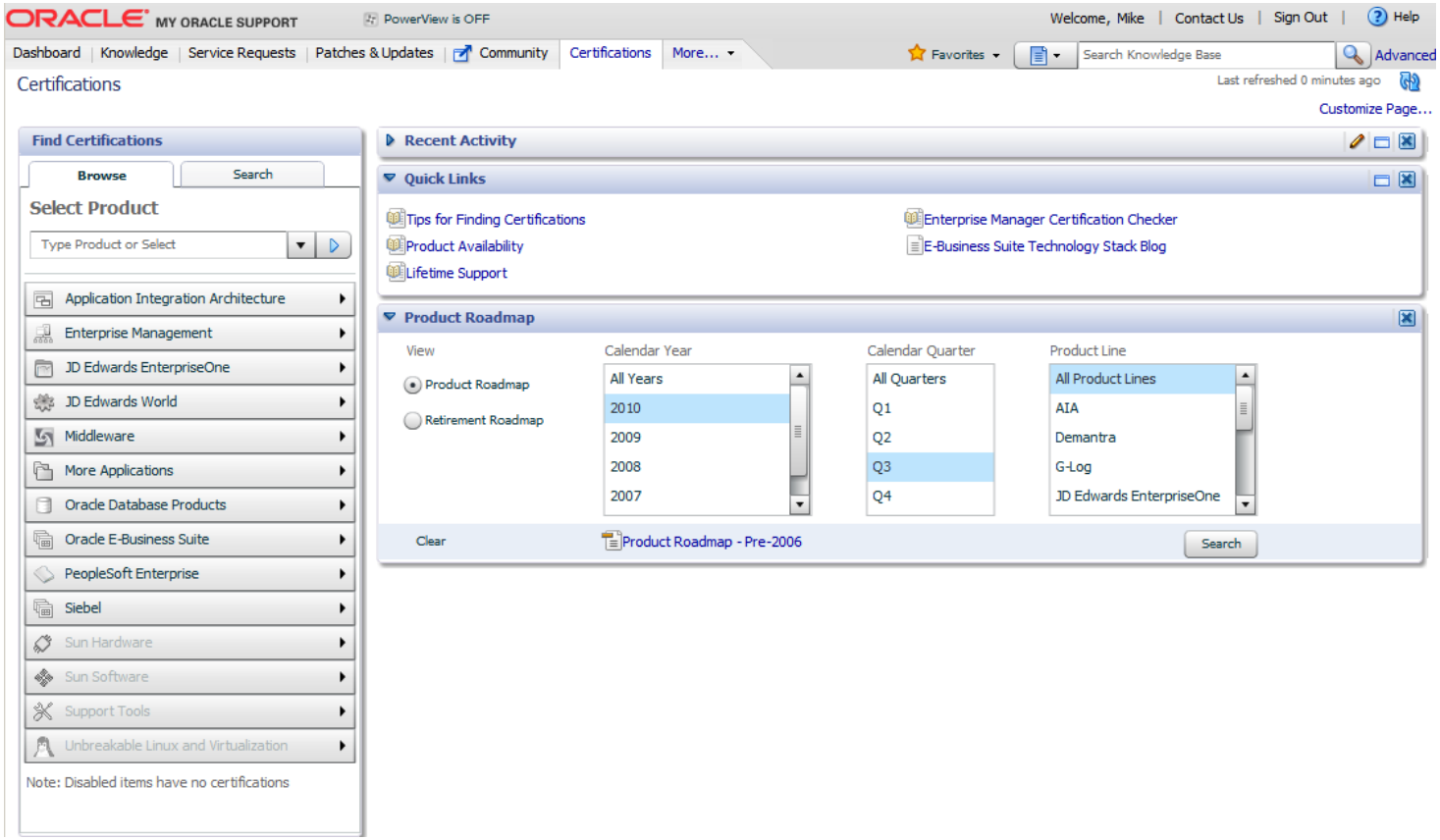
Oracle Certification

- Please see Note:964664.1 for explanations on products and product group assignments and Note:431578.1 on Middleware, Application Server



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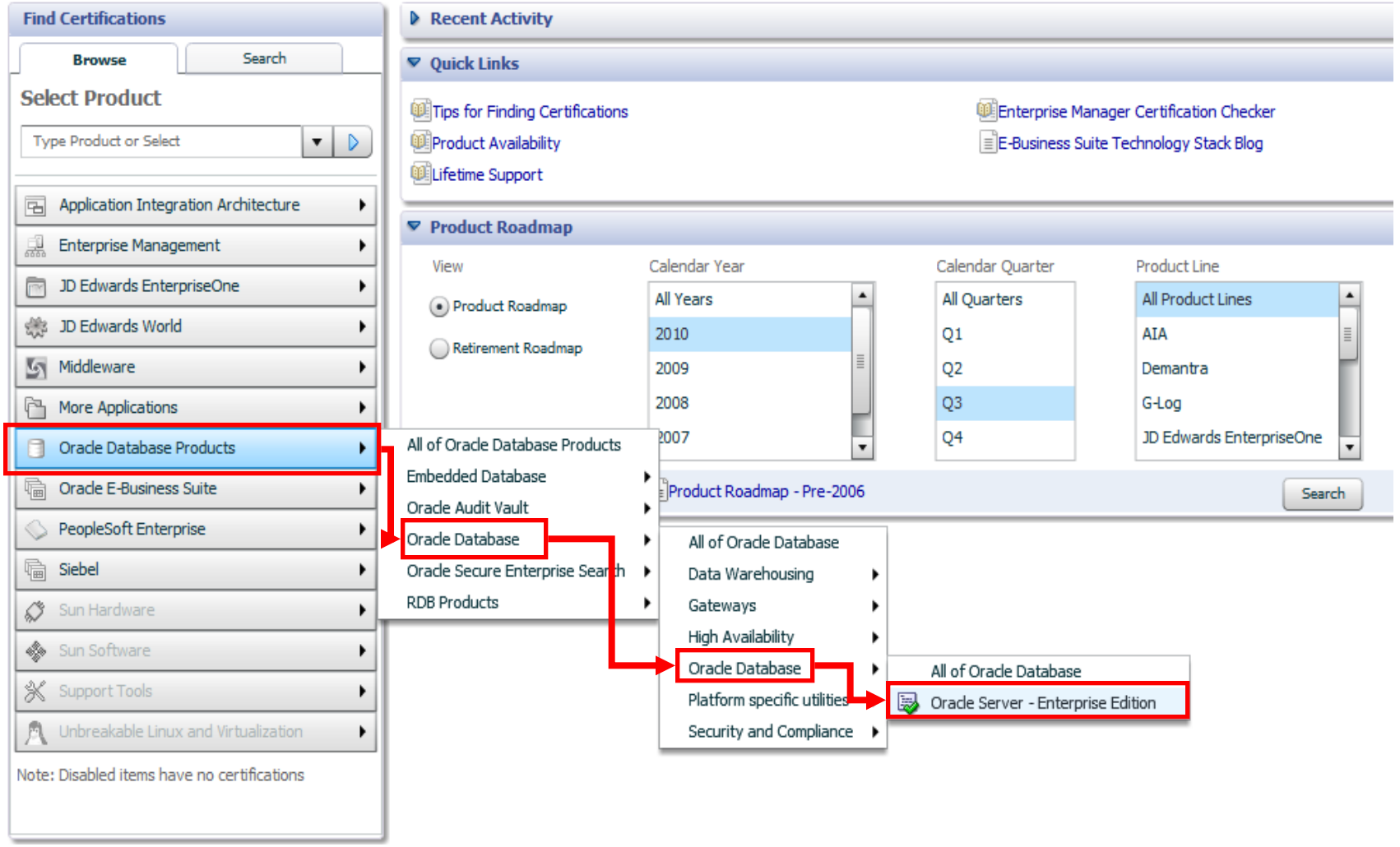
Oracle Certification



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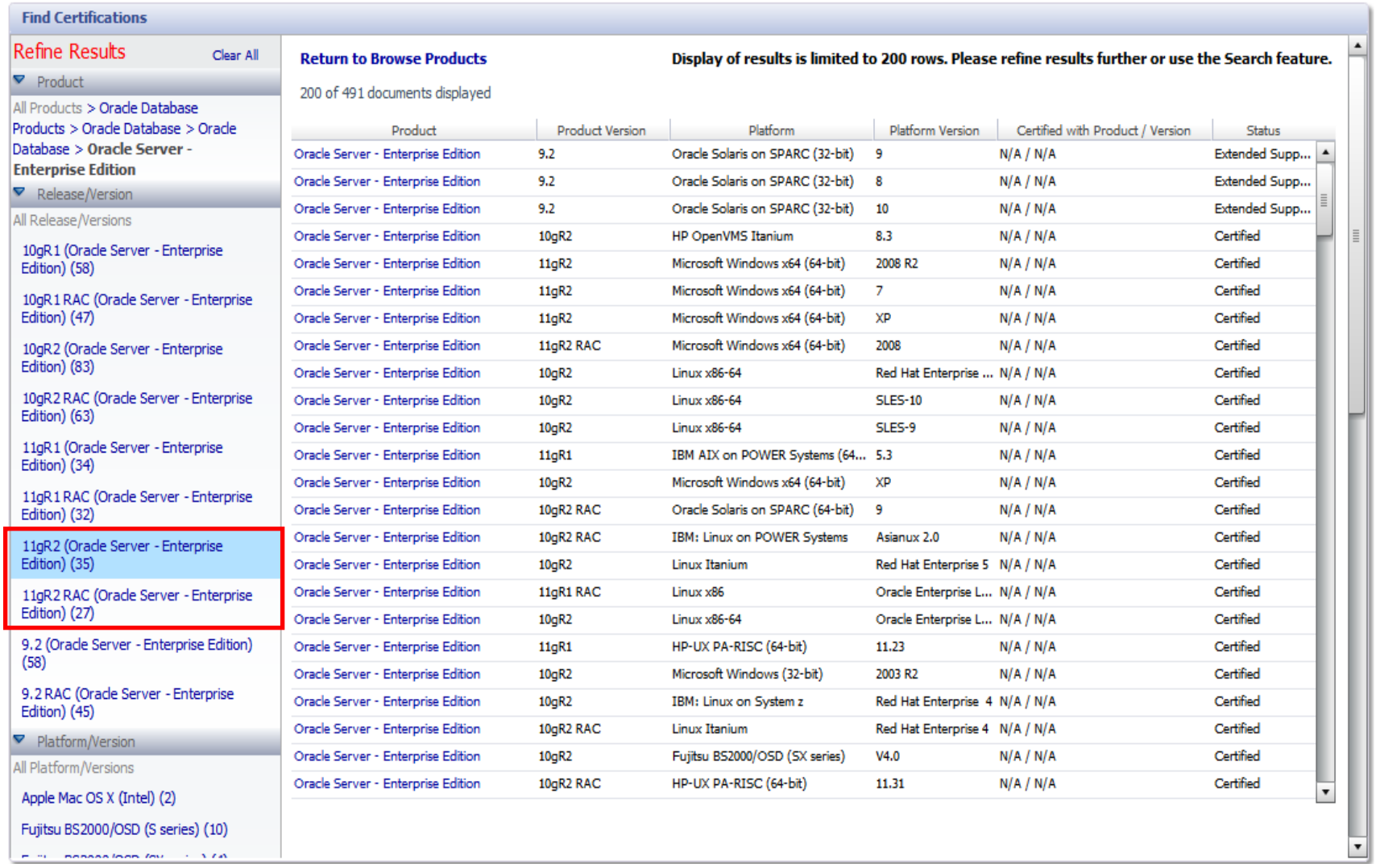

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10gR1 RAC (Oracle Server - Enterprise Edition) (47)

10gR2 (Oracle Server - Enterprise Edition) (83)

10gR2 RAC (Oracle Server - Enterprise Edition) (63)

11gR1 (Oracle Server - Enterprise Edition) (34)

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Oracle Server - Enterprise Edition	9.2	Oracle Solaris on SPARC (32-bit)	9	N/A / N/A	Extended Supp...
Oracle Server - Enterprise Edition	9.2	Oracle Solaris on SPARC (32-bit)	8	N/A / N/A	Extended Supp...
Oracle Server - Enterprise Edition	9.2	Oracle Solaris on SPARC (32-bit)	10	N/A / N/A	Extended Supp...
Oracle Server - Enterprise Edition	10gR2	HP OpenVMS Itanium	8.3	N/A / N/A	Certified
Oracle Server - Enterprise Edition	11gR2	Microsoft Windows x64 (64-bit)	2008 R2	N/A / N/A	Certified
Oracle Server - Enterprise Edition	11gR2	Microsoft Windows x64 (64-bit)	7	N/A / N/A	Certified
Oracle Server - Enterprise Edition	11gR2	Microsoft Windows x64 (64-bit)	XP	N/A / N/A	Certified
Oracle Server - Enterprise Edition	11gR2 RAC	Microsoft Windows x64 (64-bit)	2008	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Linux x86-64	Red Hat Enterprise ...	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Linux x86-64	SLES-10	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Linux x86-64	SLES-9	N/A / N/A	Certified
Oracle Server - Enterprise Edition	11gR1	IBM AIX on POWER Systems (64...	5.3	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Microsoft Windows x64 (64-bit)	XP	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2 RAC	Oracle Solaris on SPARC (64-bit)	9	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2 RAC	IBM: Linux on POWER Systems	Asianux 2.0	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Linux Itanium	Red Hat Enterprise 5	N/A / N/A	Certified
Oracle Server - Enterprise Edition	11gR1 RAC	Linux x86	Oracle Enterprise L...	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Linux x86-64	Oracle Enterprise L...	N/A / N/A	Certified
Oracle Server - Enterprise Edition	11gR1	HP-UX PA-RISC (64-bit)	11.23	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Microsoft Windows (32-bit)	2003 R2	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	IBM: Linux on System z	Red Hat Enterprise 4	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2 RAC	Linux Itanium	Red Hat Enterprise 4	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2	Fujitsu BS2000/OSD (SX series)	V4.0	N/A / N/A	Certified
Oracle Server - Enterprise Edition	10gR2 RAC	HP-UX PA-RISC (64-bit)	11.31	N/A / N/A	Certified

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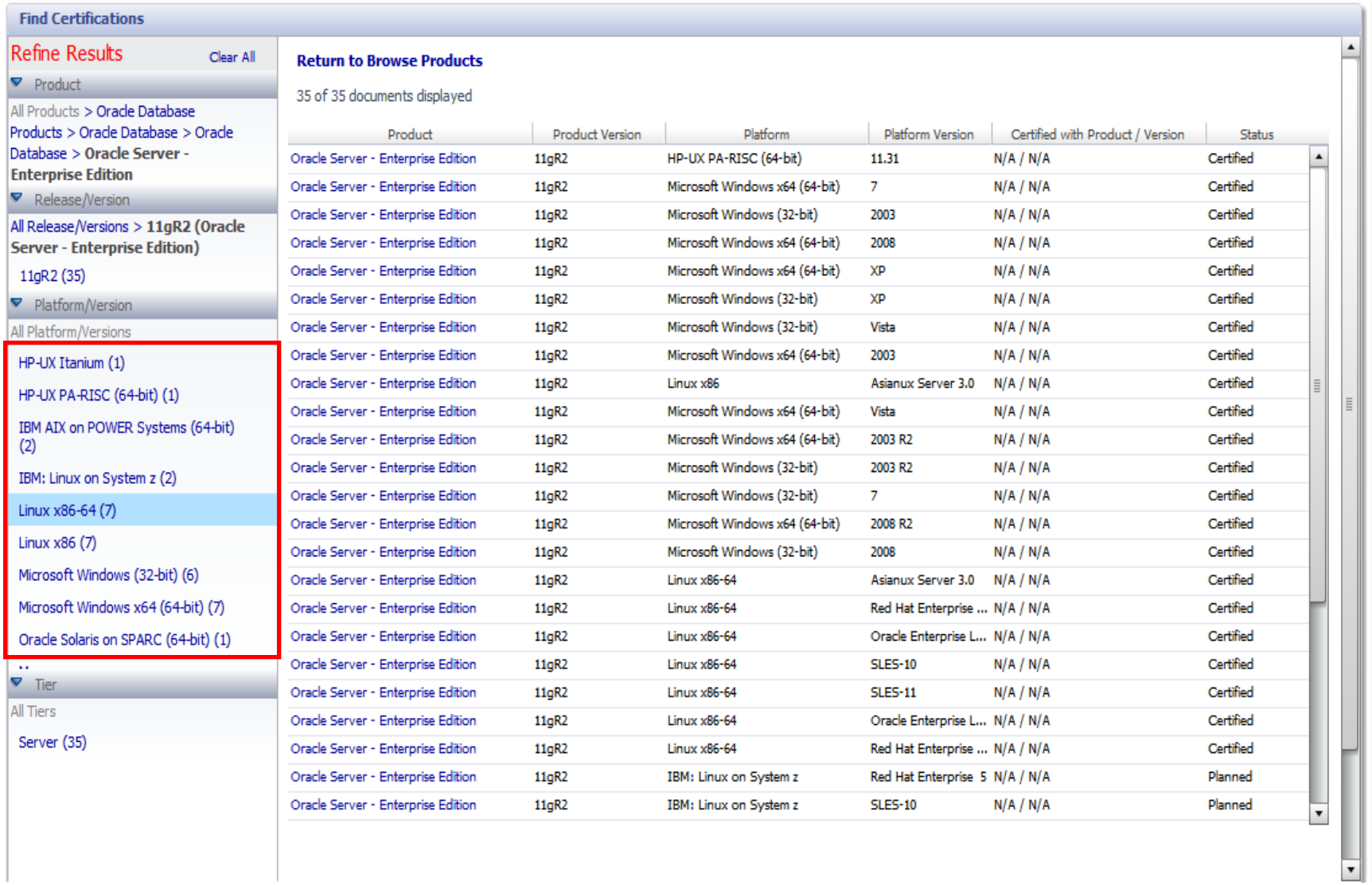

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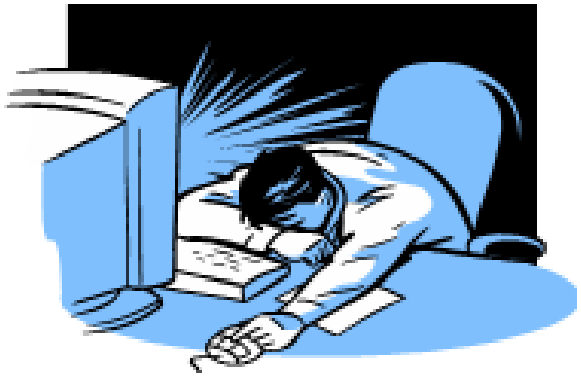
Upgrade Length



- How long will the upgrade take to complete?
  - Independent of:
    - Size of the database
    - Used datatypes
  - Dependent mainly on:
    - The number of installed components and options
    - Valid and non-stale data dictionary statistics
    - Number of synonyms – they'll get recompiled (upgrade from 9*i*)
    - Number of objects in XDB
    - At a very low rate, if `COMPATIBLE` is increased:
      - Number of datafiles
      - Size of redo logs

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Upgrade Length

- Speed up your upgrade performance by:
  - Truncating the auditing table SYS.AUD$

```
SQL> truncate SYS.AUD$;
```

  - Possibly switch off archiving
    - Make sure this is not against your business rules
  - Creating dictionary statistics right before the upgrade
    - Oracle 9*i*:

```
SQL> exec DBMS_STATS.GATHER_SCHEMA_STATS
     ('SYS', options => 'GATHER',estimate_percent =>
     DBMS_STATS.AUTO_SAMPLE_SIZE, method_opt => 'FOR
     ALL COLUMNS SIZE AUTO', cascade => TRUE);
```

    - Oracle 10*g*/11*g*:

```
SQL> exec DBMS_STATS.GATHER_DICTIONARY_STATS;
```

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Upgrade is easier!

- The upgrade to Oracle Database 11*g* is much easier than any upgrades to earlier Oracle releases

- Size of Upgrade guides:
  - *8.1.7* - 512 pages
  - *9.0.1* - 484 pages – 111 steps for an RDBMS with 9 components
  - *9.2.0* - 344 pages
  - *10.1.0* - 170 pages
  - *10.2.0* - 140 pages
  - *11.1.0* - 186 pages
  - *11.2.0* -178 pages

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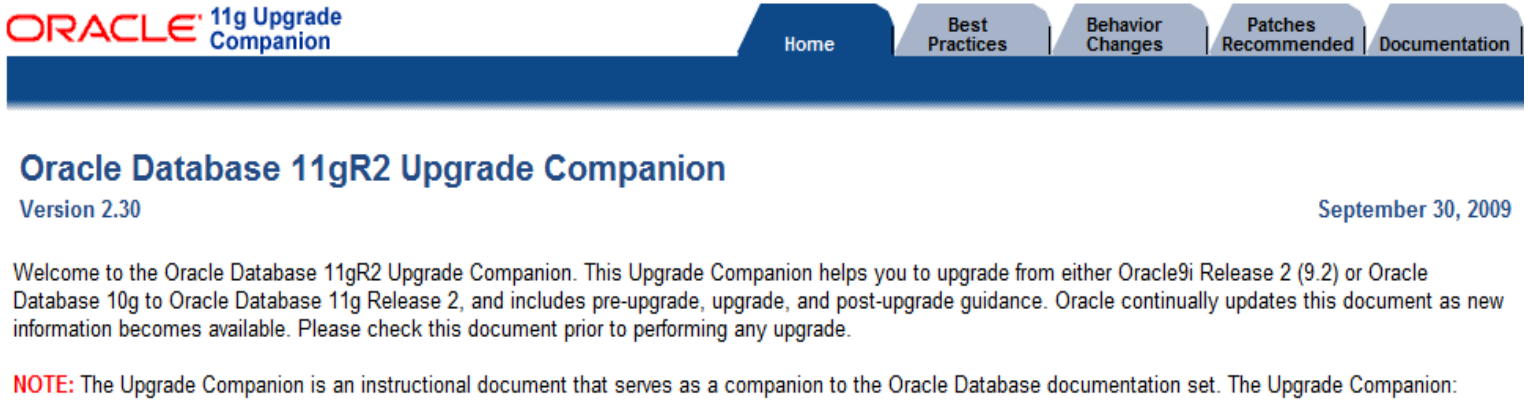
Documentation

- Note:601807.1 Upgrade Companion 11*g*

- Note:785351.1 Upgrade Companion 11*g* Release 2



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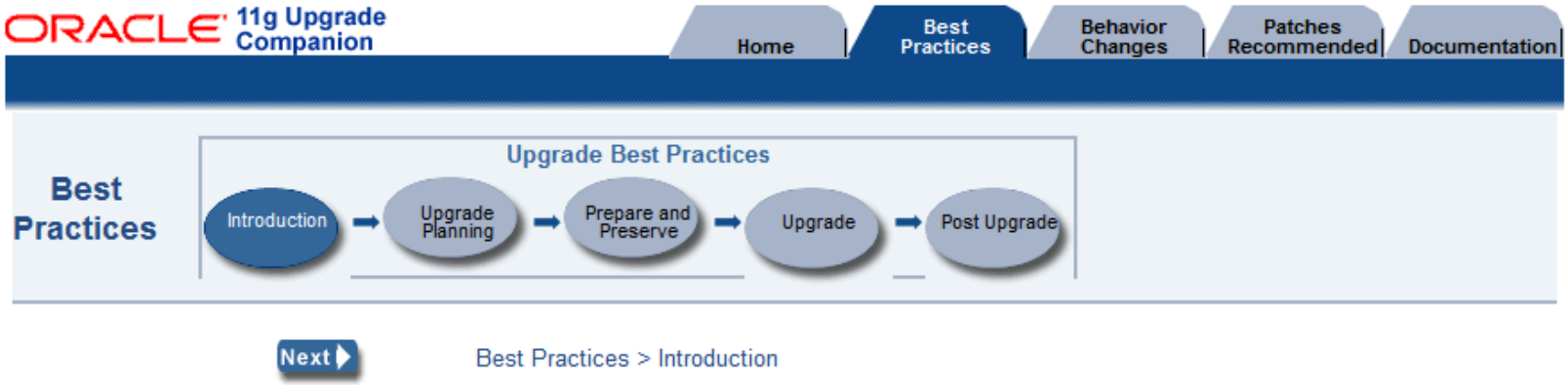
Documentation

- Note:785351.1 Upgrade Companion 11g Release 2



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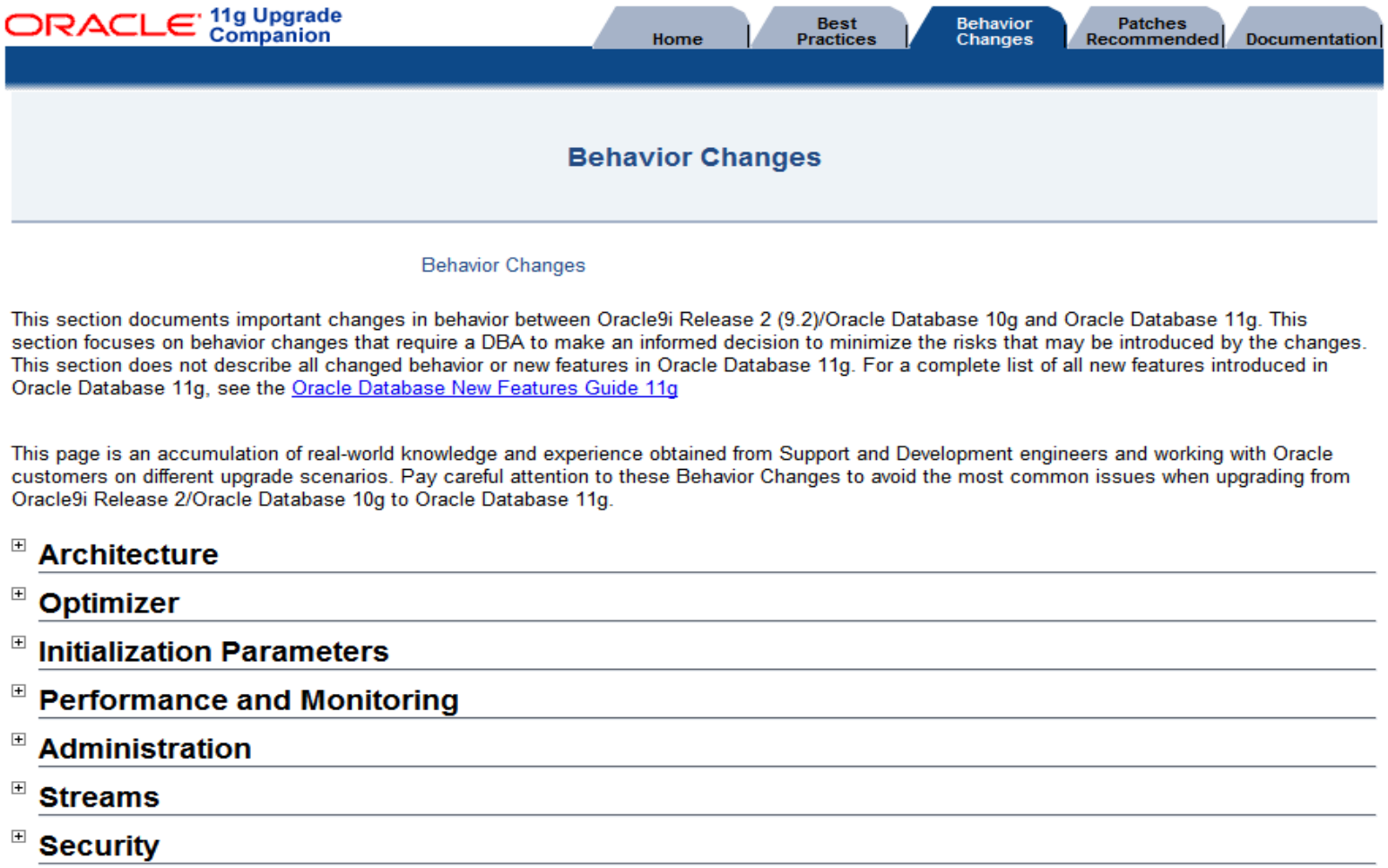
Documentation

- Note:785351.1 Upgrade Companion 11g Release 2



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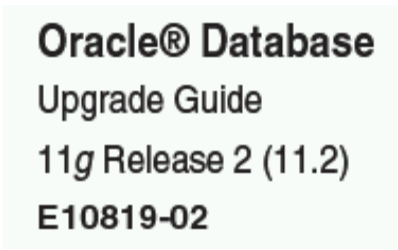
Documentation

- Upgrade Guide
  - 

    http://download.oracle.com/docs/cd/E11882_01/server.112/e10819/toc.htm

- Important Notes
  - Note:837570.1
    Complete Checklist for Manual Upgrades to 11*g* Release 2
  - Note: 421191.1
    Complete checklist for manual upgrades from X to Y
  - Upgrading from 9i to 10g: What to expect from the Optimizer
    http://www.oracle.com/technetwork/database/features/bi-datawarehousing/twp-bidw-optimizer-10gr2-0208-130973.pdf
  - Upgrading from 10g to 11g: What to expect from the Optimizer
    http://www.oracle.com/technetwork/database/features/bi-datawarehousing/twp-upgrading-10g-to-11g-what-to-ex-133707.pdf

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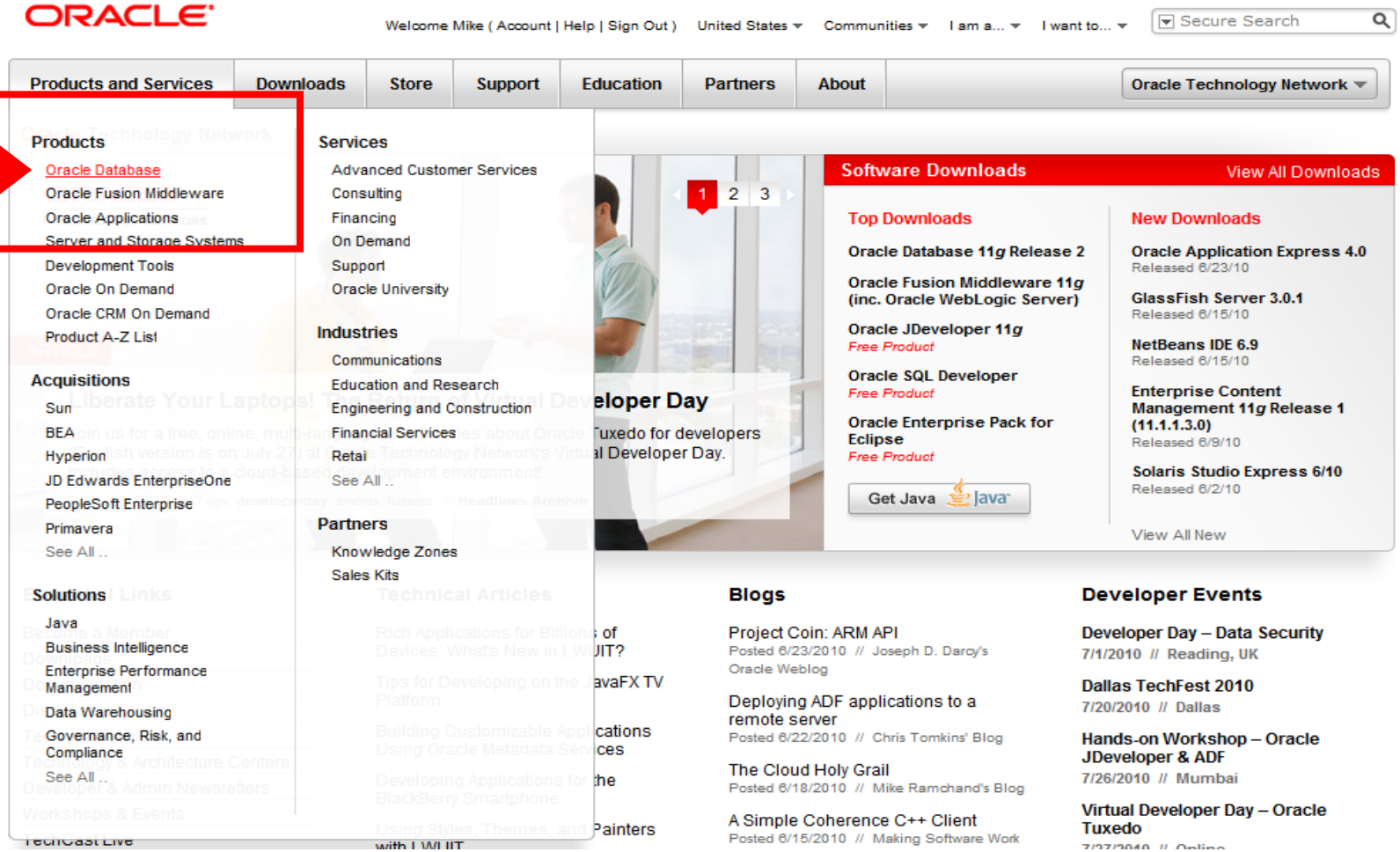
OTN Upgrade Page

- http://www.oracle.com/technetwork/database/upgrade/index.html



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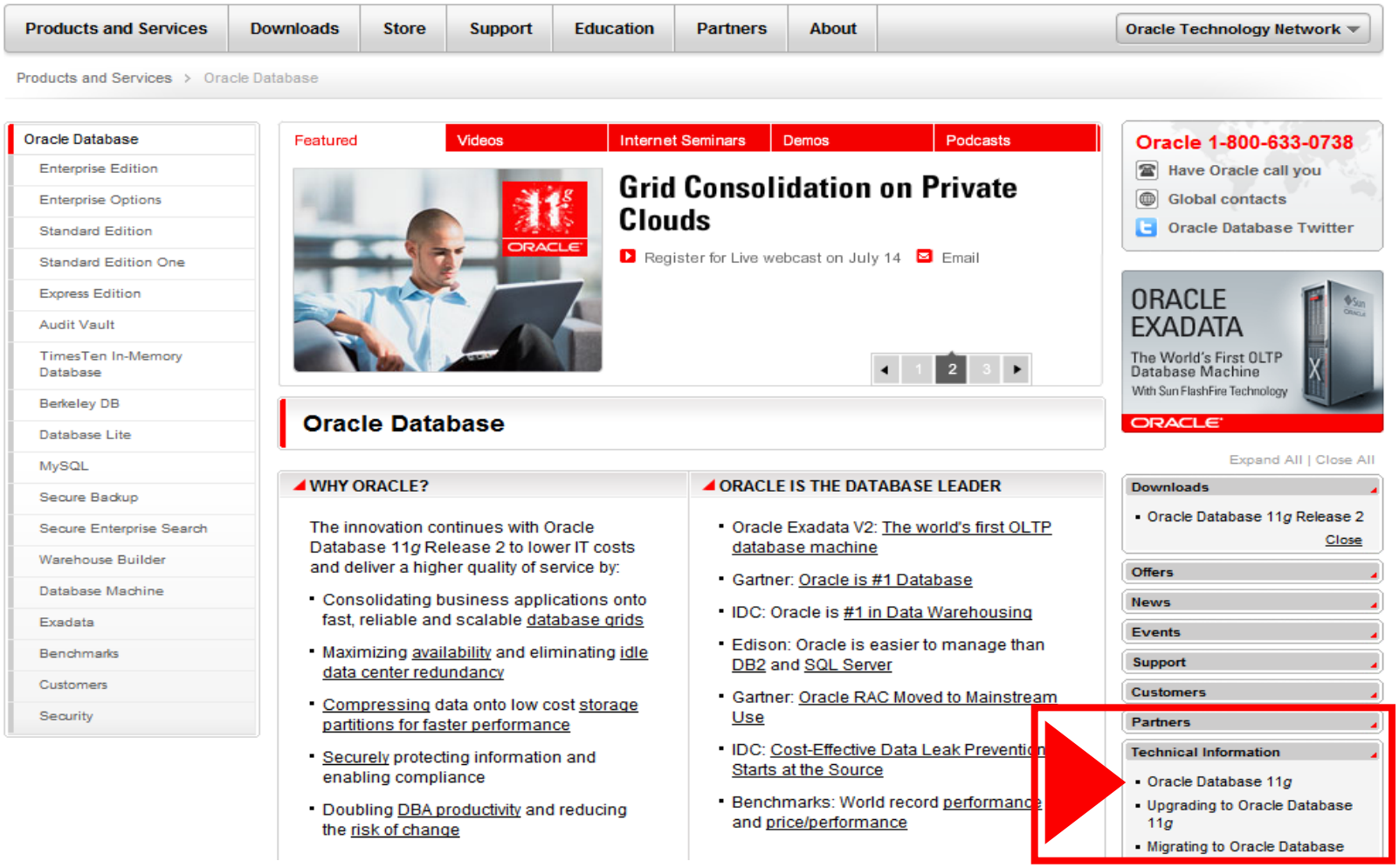
OTN Upgrade Page

- http://www.oracle.com/technetwork/database/upgrade/index.html



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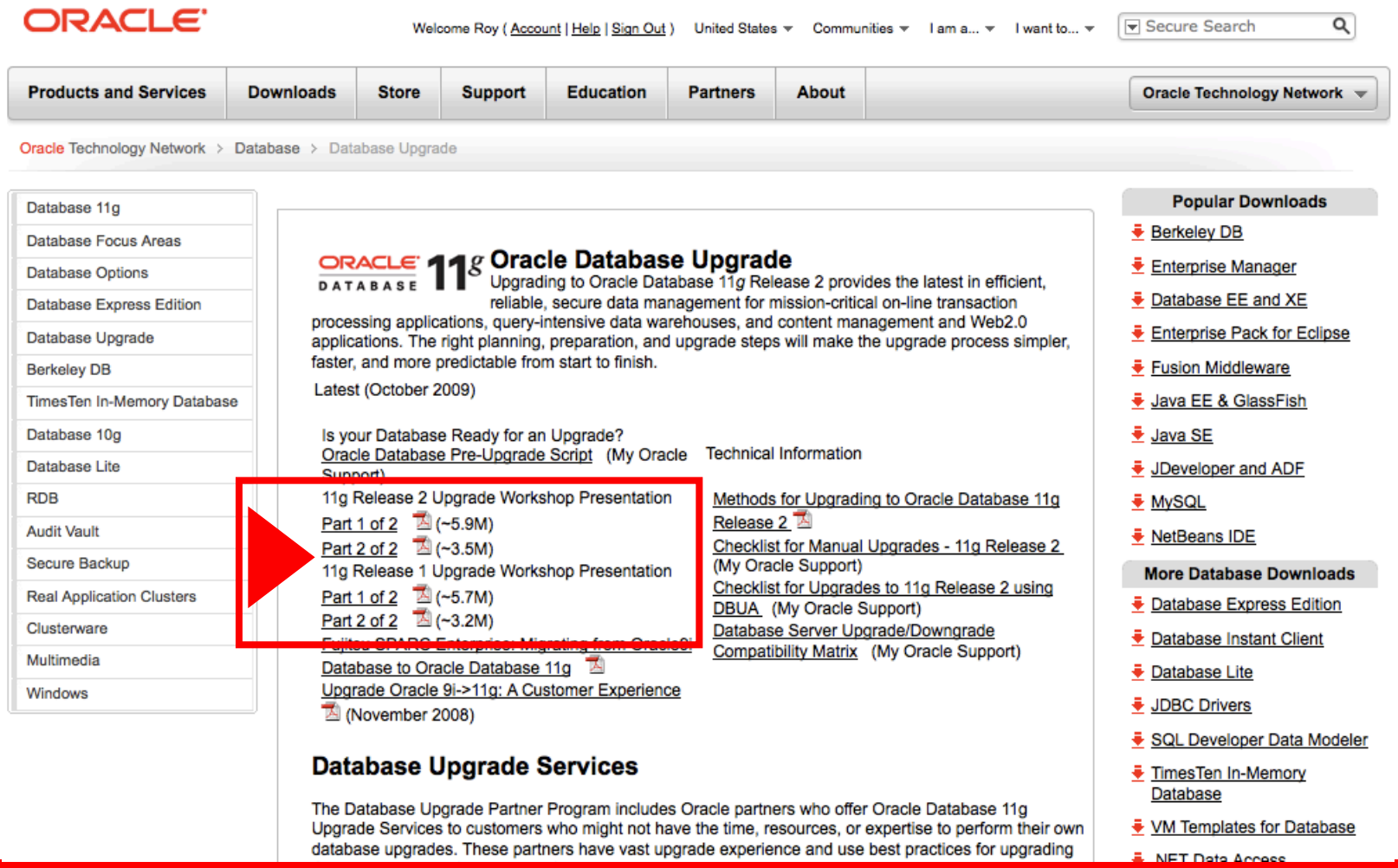
OTN Upgrade Page

- http://www.oracle.com/technetwork/database/upgrade/index.html



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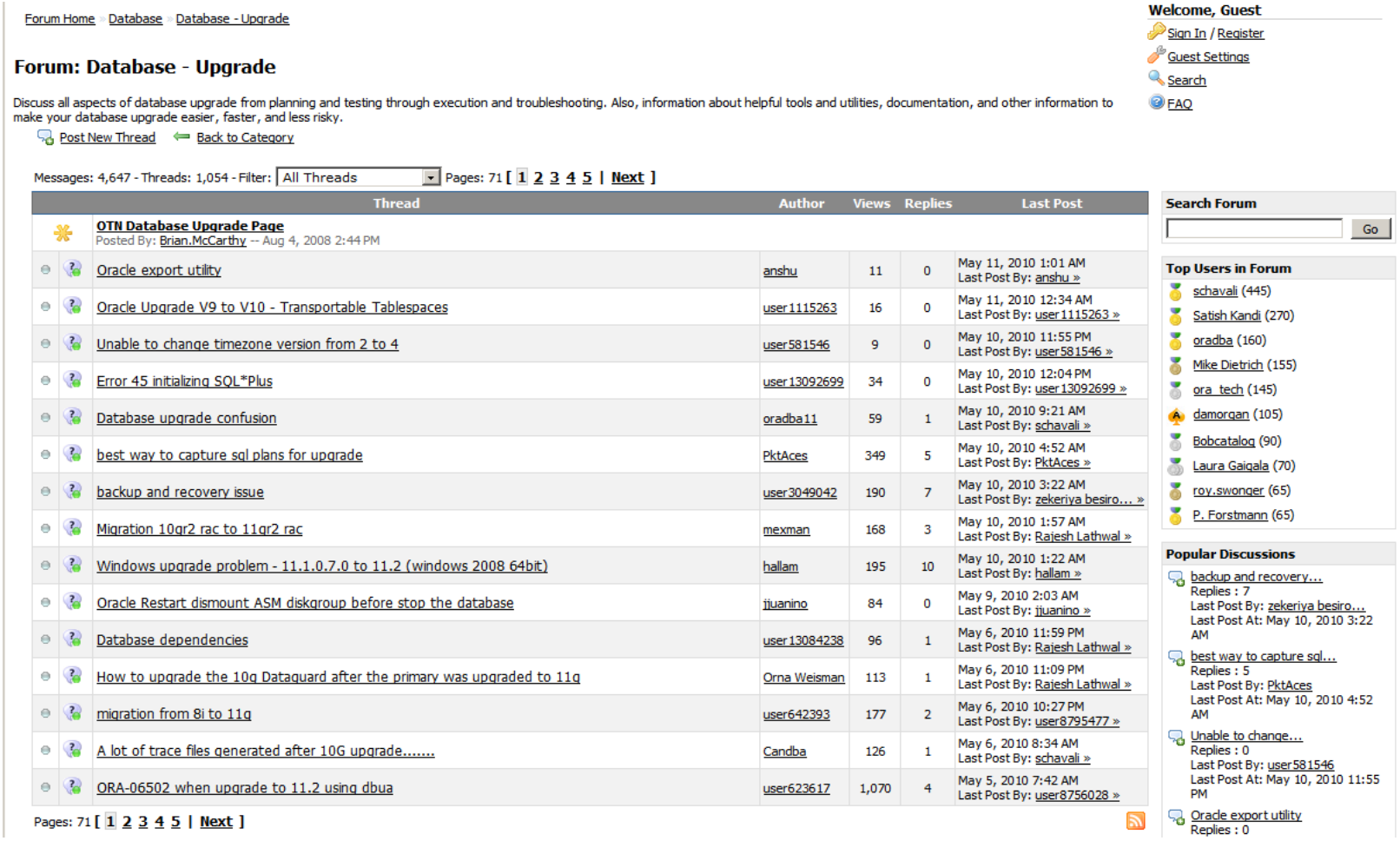
OTN Upgrade Forum

- http://forums.oracle.com/forums/forum.jspa?forumID=583&start=0



Forum Home » Database » Database - Upgrade

Forum: Database - Upgrade

Discuss all aspects of database upgrade from planning and testing through execution and troubleshooting. Also, information about helpful tools and utilities, documentation, and other information to make your database upgrade easier, faster, and less risky.

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Thread	Author	Views	Replies	Last Post
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Oracle export utility	anshu	11	0	May 11, 2010 1:01 AM Last Post By: anshu »
Oracle Upgrade V9 to V10 - Transportable Tablespaces	user1115263	16	0	May 11, 2010 12:34 AM Last Post By: user1115263 »
Unable to change timezone version from 2 to 4	user581546	9	0	May 10, 2010 11:55 PM Last Post By: user581546 »
Error 45 initializing SQL*Plus	user13092699	34	0	May 10, 2010 12:04 PM Last Post By: user13092699 »
Database upgrade confusion	oradba11	59	1	May 10, 2010 9:21 AM Last Post By: schavali »
best way to capture sql plans for upgrade	PktAces	349	5	May 10, 2010 4:52 AM Last Post By: PktAces »
backup and recovery issue	user3049042	190	7	May 10, 2010 3:22 AM Last Post By: zekeriya besiro... »
Migration 10gr2 rac to 11gr2 rac	mexman	168	3	May 10, 2010 1:57 AM Last Post By: Rajesh Lathwal »
Windows upgrade problem - 11.1.0.7.0 to 11.2 (windows 2008 64bit)	hallam	195	10	May 10, 2010 1:22 AM Last Post By: hallam »
Oracle Restart dismount ASM diskgroup before stop the database	jjuanino	84	0	May 9, 2010 2:03 AM Last Post By: jjuanino »
Database dependencies	user13084238	96	1	May 6, 2010 11:59 PM Last Post By: Rajesh Lathwal »
How to upgrade the 10g Dataguard after the primary was upgraded to 11g	Orna Weisman	113	1	May 6, 2010 11:09 PM Last Post By: Rajesh Lathwal »
migration from 8i to 11g	user642393	177	2	May 6, 2010 10:27 PM Last Post By: user8795477 »
A lot of trace files generated after 10G upgrade.....	Candba	126	1	May 6, 2010 8:34 AM Last Post By: schavali »
ORA-06502 when upgrade to 11.2 using dbua	user623617	1,070	4	May 5, 2010 7:42 AM Last Post By: user8756028 »

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Last Post At: May 10, 2010 3:22 AM
best way to capture sql...
Replies : 5
Last Post By: PktAces
Last Post At: May 10, 2010 4:52 AM
Unable to change...
Replies : 0
Last Post By: user581546
Last Post At: May 10, 2010 11:55 PM
Oracle export utility
Replies : 0

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Upgrade Blog: blogs.oracle.com/UPGRADE

Upgrade your Database - NOW!

ORACLE

Ease your Oracle Database upgrades - Best Practices, Workshops, Projects ...

Upcoming Upgrade Workshops in Tampa, Atlanta, Montreal - and together with Tom Kyte in Denver and Salt Lake City

By Mike Dietrich on August 27, 2010 11:10 AM

Roy is looking forward to meet you there :-) So don't wait to long and SIGN UP TODAY:

- **Tampa, FL, Sept 15, 2010**
  The Intercontinental Tampa - 4860 West Kennedy Blvd. - Tampa, FL 33609
- **Atlanta, GA, Sept 16, 2010**
  The Mansion in Buckhead - 3376 Peachtree Road NE - Atlanta, GA 30326
- **Montreal, Oct 15, 2010**
  Hyatt Regency Montreal - 1255 Rue Jeanne-Mance - Montreal, QC H5B 1E5

And we'd like to announce also these workshops together with Tom Kyte:

- **Denver, CO, Sept 8, 2010**
  Westin Tabor Centre - 1672 Lawrence St - Denver, CO
- **Salt Lake City, UT, Sept 9, 2010**
  Salt Lake City Marriott Downtown - 75 S West Temple - Salt Lake City, UT 84101

CU there :-)

About

Mike Dietrich
Consulting Member Technical Staff
Database Upgrade Development
ORACLE Corporation

Working out of the **Oracle's** Munich office in Germany acting as interlink between customers and Oracle's Upgrade Development.
You'd like to connect with me?
LinkedIn or **XING** :-)

Search All Blogs

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41 External 11.2 References (1/3)

Ref	Name	Country	Industry	System Name	Platform	OS	Release	Nodes	System Status	Application Provider
✓	Allegro Group	Poland	Consumer/Retail /Distribution	SUN DB MACHINE	Sun	Linux	11gR2	8	Production	-
✓	Avea	Turkey	Telecommunications	Avea Database Machine 1	Sun	Linux	11gR2	8	Project Initiation	Custom
✓	BNP PARIBAS	France	Financial Services	BNP PARIBAS - BUSSY ST GEORGE - 1/2 SAS	Sun	Linux	11gR2	4	Installation	-
✓	BNP PARIBAS	France	Financial Services	BNP PARIBAS - ST DENIS - 1/2 SAS	Sun	Linux	11gR2	-	Installation	-
✓	BNP PARIBAS	France	Financial Services	BNP PARIBAS - ST DENIS - 2 SATA STORAGE SVRS	Sun	Linux	11gR2	4	Installation	-
✓	Banca Transilvania / Romania	Romania	Financial Services	BANCA TRANSILVANIA S.A. - SUN DB MACHINE - 1/2 SAS RACK	Sun	Linux	11gR2	4	Installation	-
✓	Cardinal Health	United States	Healthcare	Exadata	Sun	Linux	11gR2	4	Project Initiation	-
✓	Commonwealth Bank of Australia	Australia	Financial Services	COMMONWEALTH BANK OF AUSTRALIA - FULL SAS	Sun	Linux	11gR2	8	Installation	-
✓	Commonwealth Bank of Australia	Australia	Financial Services	COMMONWEALTH BANK OF AUSTRALIA - SUN DB MACHINE - 1/2 RACK SAS	Sun	Linux	11gR2	4	Installation	-
✓	Commonwealth Bank of Australia	Australia	Financial Services	Peoplesoft / Oracle as a Service	Sun	Linux	11gR2	4	Test	Peoplesoft
✓	E-Plus	Germany	Telecommunications	DWH	Sun	Linux	11gR2	4	Pilot	-
✓	Festo	Germany	Metals Manufacturing	TLIST	HP	HP-UX	11gR2	1	Pilot	-
✓	Genentech	United States	Life Sciences	GENENTECH - REDWOOD CITY - 1/4 RACK SAS	Sun	Linux	11gR2	2	Installation	-
✓	Genentech	United States	Life Sciences	GENENTECH - VACAVILLE - 1/4 RACK SAS	Sun	Linux	11gR2	2	Installation	-
✓	Interhyp	Germany	Financial Services	TSUN	HP	Linux	11gR2	3	Test Complete	Custom OLTP

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41 External 11.2 References (2/3)

Ref	Name	Country	Industry	System Name	Platform	OS	Release	Nodes	System Status	Application Provider
✓	Jung von Matt	Germany	Communications and Media	MAIL	Dell	Linux	11gR2	8	Test	Oracle Collaboration Suite
✓	KnowledgeBase Marketing	United States	Services	KNOWLEDGEBASE MARKETING - FULL RACK SAS #1 - ODM2	Sun	Linux	11gR2	8	Installation	-
✓	KnowledgeBase Marketing	United States	Services	KNOWLEDGEBASE MARKETING - FULL RACK SAS #2 - ODM3	Sun	Linux	11gR2	8	Installation	-
✓	LinkShare	United States	Communications and Media	LINKSHARE -SUN DB MACHINE- FULL RACK SAS	Sun	Linux	11gR2	8	Installation	Custom
✓	OOCL	Hong Kong	Travel and Transportation	MOBILE CARGO TRACKING	HP	Linux	11gR2	2	Production	-
✓	PHILIPPINE SAVINGS BANK	Philippines	Financial Services	PHILIPPINE SAVINGS BANK - SUN DB MACHINE - 1/2 SAS RACK	Sun	Linux	11gR2	4	Installation	Custom
✓	Provincia Autonoma di Bolzano – autonomous province of Bozen	Italy	Government	newGIS	Dell	Linux	11gR2	1	Pilot	Custom
✓	SI Mobile	Slovenia	Telecommunications	SI Mobile DBM 1	Sun	Linux	11gR2	2	Project Initiation	-
✓	SOGEI	Italy	Government	GeoPOI	Sun	Solaris	11gR2	1	Production	Custom
✓	SWISSCOM (SCHWEIZ) AG	Switzerland	Telecommunications	SWISSCOM - SUN DB MACHINE - 1/4 RACK SAS -BDM1	Sun	Linux	11gR2	2	Installation	-
✓	Sharp HealthCare	United States	Healthcare	Data Warehouse - financial data, medical records and clinical research data	IBM	AIX	11gR2	1	Production	-
✓	Sistema informativo agricolo nazionale (SIAN)	Italy	Government	Geo Datawarehouse Condizionalità	IBM	AIX	11gR2	2	Pilot	-
✓	Stadt Borken	Germany	Government	BORKEN	Other Vendor	Linux	11gR2	2	Production	AB-DATA,Aucoteam,IAC, Leipzig,Custom,DataTeam,Wagner, Thierhaupten,Kanis,Somacos,EDV Ermtraud,Prosoz,Verlag für Standesamtswesen,HSH, Berlin,KSL,MBB Dorma
✓	Stadt Emsdetten	Germany	Government	RAC System	HP	Linux	11gR2	2	Production	AB-DATA
✓	TARGUSinfo	United States	Services	ElementOne	Dell	Linux	11gR2	1	Production	TARGUSInfo

Last updated: 04-AUG-2010

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41 External 11.2 References (3/3)

Ref	Name	Country	Industry	System Name	Platform	OS	Release	Nodes	System Status	Application Provider
✓	TDS Telecommunications Corp	United States	Telecommunications	Product Applications	HP	Linux	11gR2	4	Production	Custom
✓	TUI Nederland	Netherlands	Travel and Transportation	Exadata2	Sun	Linux	11gR2	8	Production	Custom
✓	TUI Nederland	Netherlands	Travel and Transportation	TUI NEDERLAND N.V. - SUN DB MACHINE - FULL RACK SAS	Sun	Linux	11gR2	8	Installation	Custom
✓	Tim w.e.	Portugal	Communications and Media	TIM W.E. - SUN DB MACHINE - 1/4 RACK SAS	Sun	Linux	11gR2	2	Installation	-
✓	Turkcell	Turkey	Telecommunications	Turkcell Database Machine 1	Sun	Linux	11gR2	8	Test	-
✓	Turkcell	Turkey	Telecommunications	Turkcell Database Machine 2	Sun	Linux	11gR2	2	Test	Custom
✓	University of Phoenix	United States	Education	Documentum 6.5	Other Vendor	Linux	11gR2	4	Production	Documentum
✓	University of Phoenix	United States	Education	Osiris	Other Vendor	Linux	11gR2	3	Production	Custom
✓	University of Phoenix	United States	Education	Sabrix	Other Vendor	Linux	11gR2	2	Production	Sabrix
✓	Verizon Wireless	United States	Telecommunications	Verizon Wireless	HP	Linux	11gR2	3	Production	Custom
✓	eDialog	United States	High Technology	EDIALOG - SUN DB MACHINE - FULL RACK SAS	Sun	Linux	11gR2	8	Installation	-

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http://www.oracle.com/customers/snapshots/taobao-database-case-study.pdf

Taobao.com Runs China's Busiest Data Warehouse on 20 Node Database Cluster

淘宝网

Taobao.com
Hangzhou, China
www.taobao.com

Industry:
Media & Entertainment

Annual Turnover:
US$14.7 billion

Employees:
More than 2,000

Oracle Products & Services:

Oracle Database
Oracle Real Application Clusters

"Oracle Real Application Clusters supports large-scale data processing and can scale to meet our rapidly growing requirements. It provides a powerful and reliable platform on which to run our Oracle data warehouse." – Wang Hai, Senior Supervisor, Taobao.com

Founded in 2003 by Alibaba.com, Taobao.com is Asia's largest online shopping Web site. The company engages in consumer-to-consumer (C2C) and business-to-consumer (B2C) trading and has a 70% share of the online market in China. More than 110 million registered members purchased goods and services worth US$14.7 billion (RMB 99.96 billion) in 2008. More than 10 million cell phones and over 140 million items of clothing were sold through the site in that year alone.

Taobao.com has used Oracle Database and clusterware products since 2004, building an enterprise data warehouse to process and analyze business and customer data.

The company recently upgraded from Oracle Database 10*g* with Real Application Clusters to Oracle Database 11*g* with Real Application Clusters. As part of the upgrade, Taobao.com deployed a 20-node database cluster to improve data processing speed. This has enabled the company to cut the time required to

ORACLE

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Sanity Operations

- Always check for INVALID objects:

```
SQL> SELECT UNIQUE object_name, object_type, owner
     FROM dba_objects WHERE status='INVALID';
```

- Fix all INVALID objects **BEFORE** the upgrade!!!!!!

- There should be no invalid objects in SYS and SYSTEM user schema
  - Recompile invalid objects with **`utlrp.sql`** before the upgrade
  - Compare invalid objects from before and after the upgrade
    - Beginning with 11.1.0.7 the comparison has been made easier
    - Run the pre-upgrade check script **`utlu112i.sql`**
    - Afterwards find invalid objects in `registry$sys_inv_objs` and `registry$nonsys_inv_objs`
    - Compare after the upgrade with: **`utluiobj.sql`**
    - The view `DBA_INVALID_OBJECTS` contains a list of invalid objects after the upgrade

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Sanity Operations

- If upgrading from 10g or 11g, purge the recyclebin

```
SQL> purge DBA_RECYCLEBIN;
```

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Sanity Operations

- Remove "old" parameters, underscores and events from your init.ora/spfile
  - Examples:

```
init.ora:
<...>
_always_semi_join=off
_unnest_subquery=false
<...>
optimizer_features_enable=9.0.1
<...>
event = "10061 trace name context forever, level 10"
<...>
```

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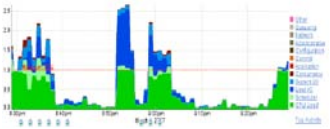
Preparation



- Preserve performance statistics
  - Get accurate performance statistics
    - Comparison: before ↔ after
    - Time specific queries and batches
  - Test upgrade of the database
    - Functional tests
    - Performance tests with real life loads!!!
      - Real Application Testing
        - SQL Performance Analyzer
        - Database Replay

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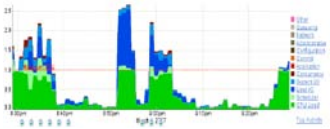
Preparation



- Collecting sufficient performance data prior to the upgrade is of vital importance
  - Sufficient means: Starting at least 4 weeks before the upgrade
  - Gather accurate performance statistics
  - In Oracle 8*i*/9*i*:
    - Use STATSPACK
      - Export the PERFSTAT user right before the upgrade
      - Note:466350.1 STATSPACK before/after upgrade
  - In Oracle 10*g*/11*g*:
    - Use AWR
      - Take snapshots every 30-60 minutes – retention: >30 days
      - Extract the AWR with: `SQL> @?/rdbms/admin/awrext.sql`
      - => For 10.1 only use: `DBMS_SWRF_INTERNAL.EXTRACT_AWR`
      - Use AWR DIFF reports to compare before & after upgrade performance: `DBMS_WORKLOAD_REPOSITORY.AWR_DIFF_REPORT_HTML`

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Installation

- How to access the software?
  - http://edelivery.oracle.com/

  - Download from OTN: http://otn.oracle.com/software/index.html

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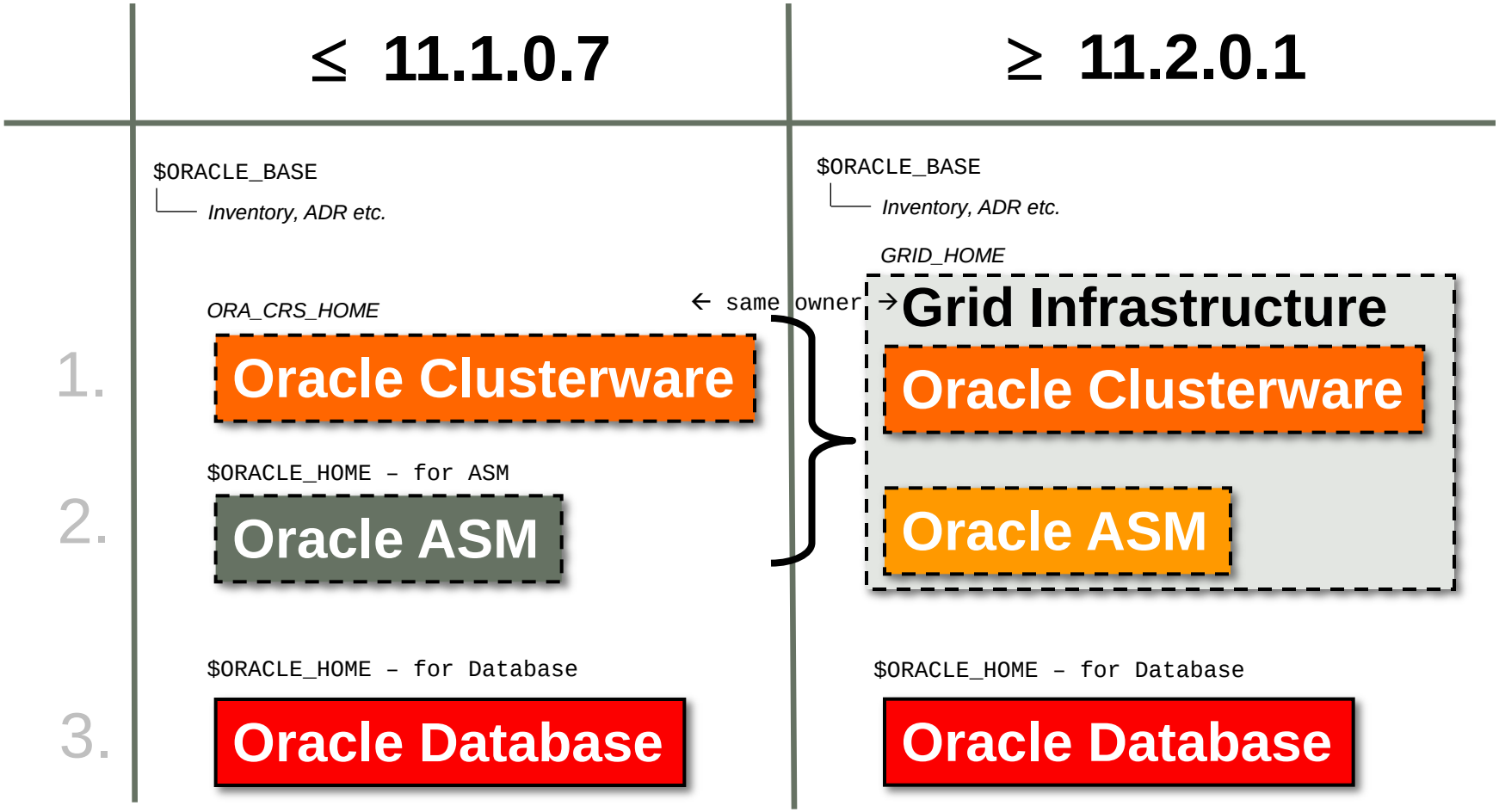
Installation overview



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Oracle Clusterware Upgrade 11*g* and 11.2

- Always upgrade Oracle Clusterware first!!!
- Upgrading to Oracle Clusterware 11g:
  - Install new software into the existing Clusterware home
  - In-place software upgrade
- Upgrading to Oracle Clusterware 11g Release 2:
  - Install new software into new Grid Infrastructure home
  - Out-of-place software upgrade
  - Grid Infrastructure home is owned by 'root'

  http://download.oracle.com/docs/cd/E11882_01/install.112/e10812/prelinux.htm

- On 32-bit Windows there'll be no 32-bit Grid Infrastructure and ASM available!

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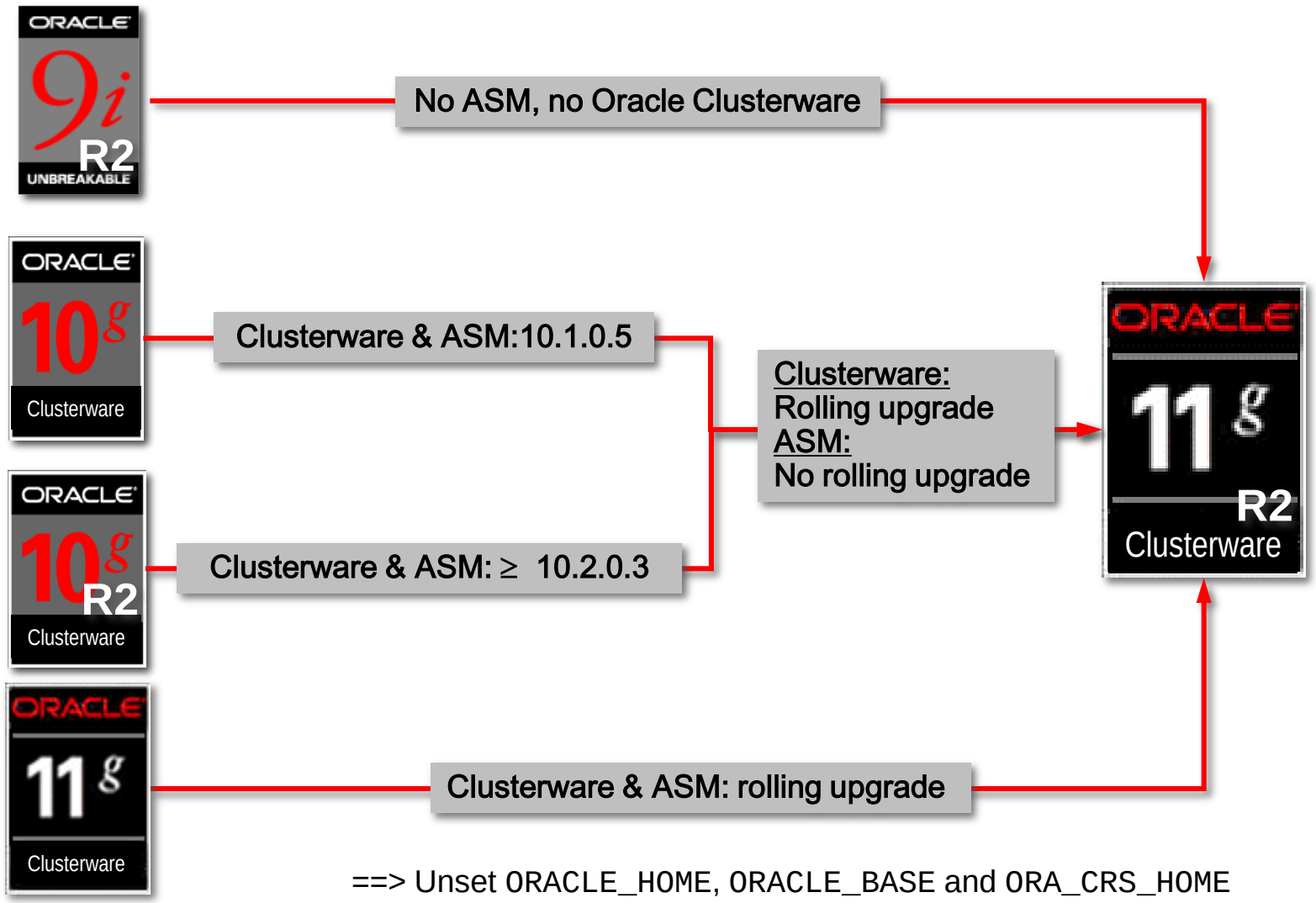
Oracle Clusterware Upgrade 11*g* Release 2



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Clusterware - ASM - DB Compatibility

Note: 337737.1

Clusterware	ASM	DB
11.2	11.2(a)	11.2
11.2	11.2(a)	11.1
11.2	11.2(a)	10.2
11.1	11.1	11.1(b)
11.1	11.1	10.2
11.1	11.1	10.1
11.1	10.2	11.1
11.1	10.2	10.2
11.1	10.2	10.1
11.1	10.1(c)	11.1
11.1	10.1(c)	10.2
11.1	10.1	10.1
10.2	10.2	10.2
10.2	10.2	10.1
10.2	10.1(c)	10.2
10.2	10.1	10.1
10.1	10.1	10.1

a) The Matrix is valid after the (rolling) upgrade has been completed. During the upgrade you may use an older ASM version.
b) Linux specific: see Note 781628.1
c) The ASM version needs to be at least 10.1.0.3

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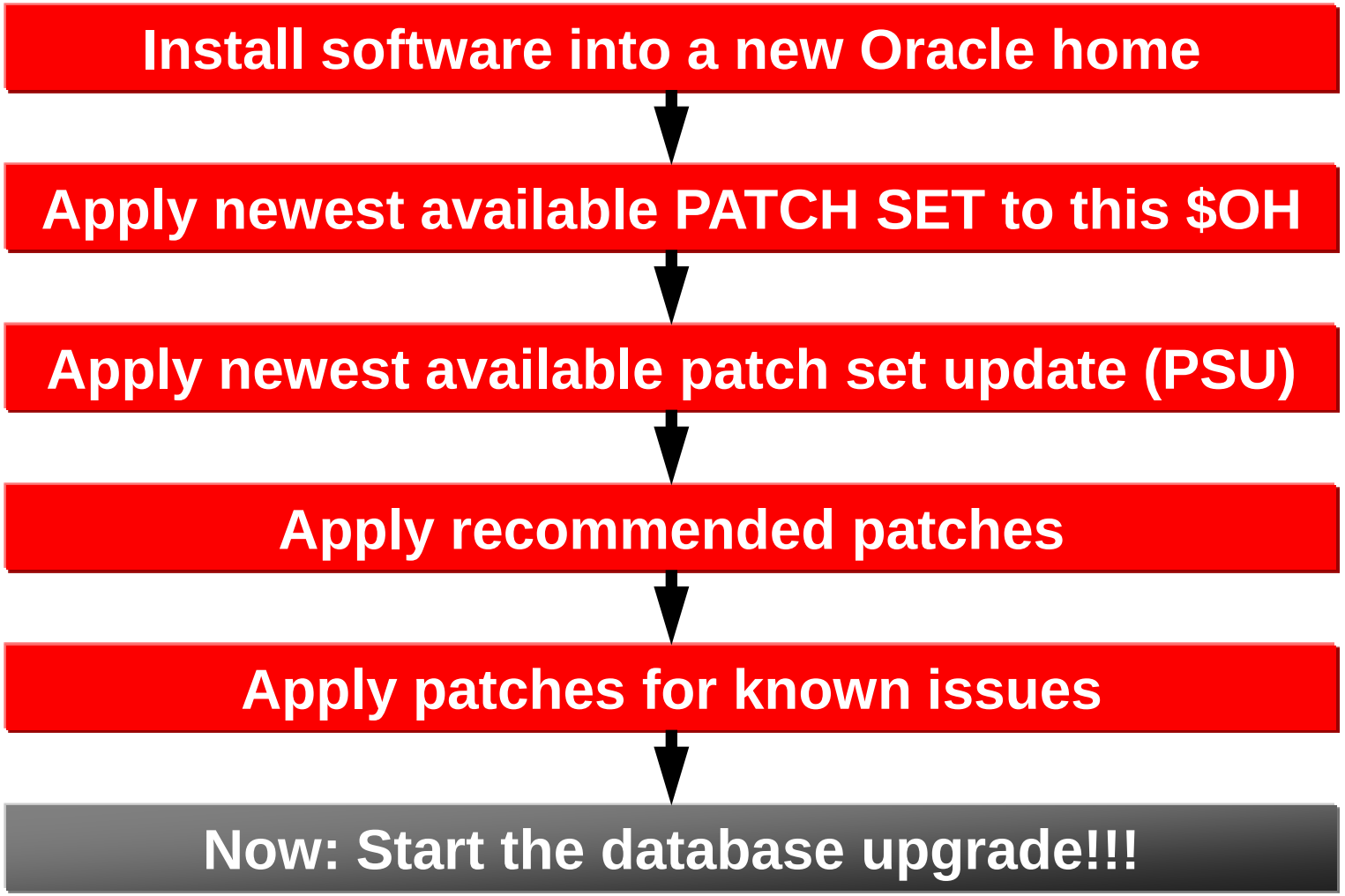
Installation Database Home



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Installation 11*g* Release 2

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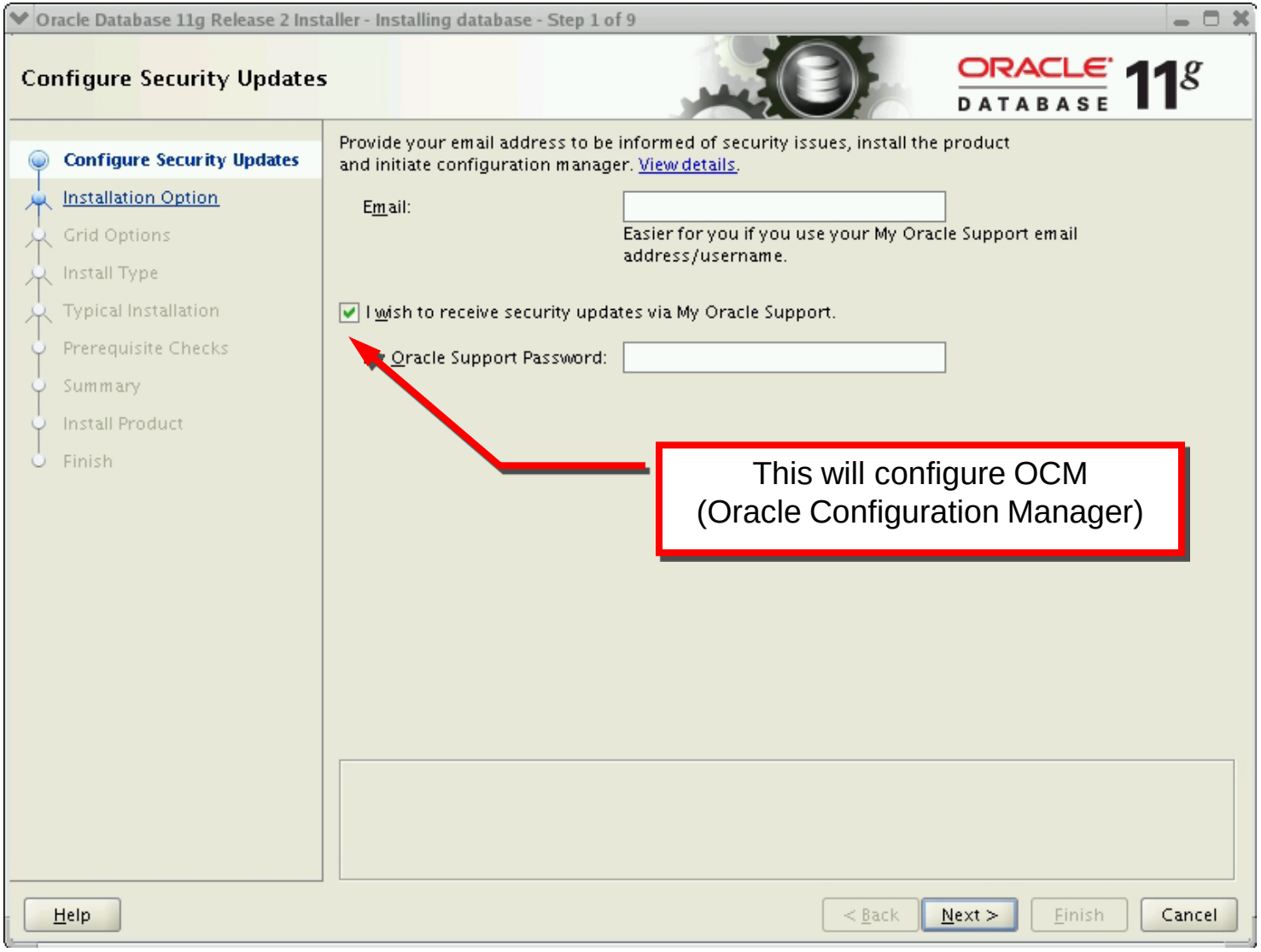
Installation 11*g* Release 2



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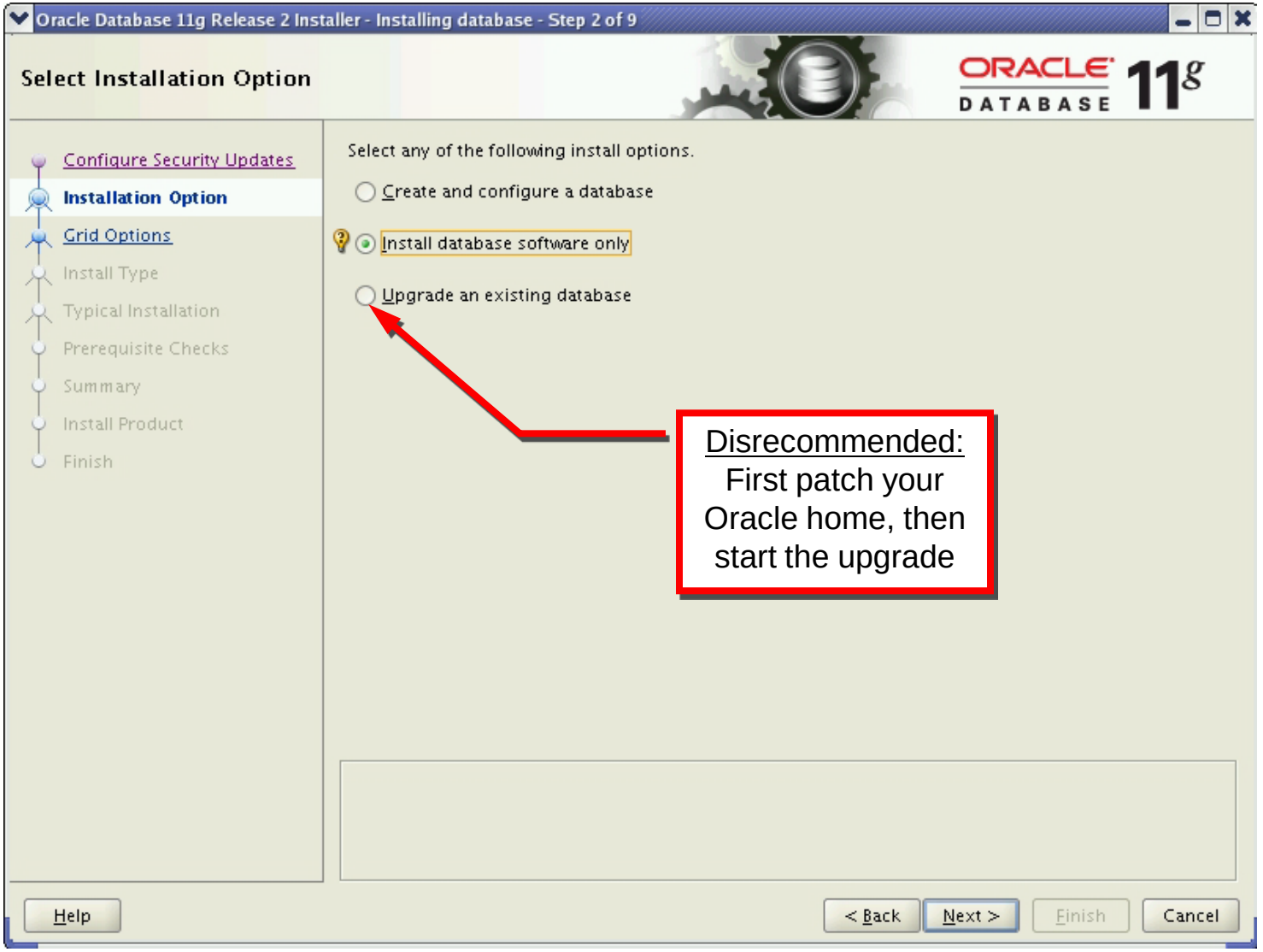
Installation 11*g* Release 2



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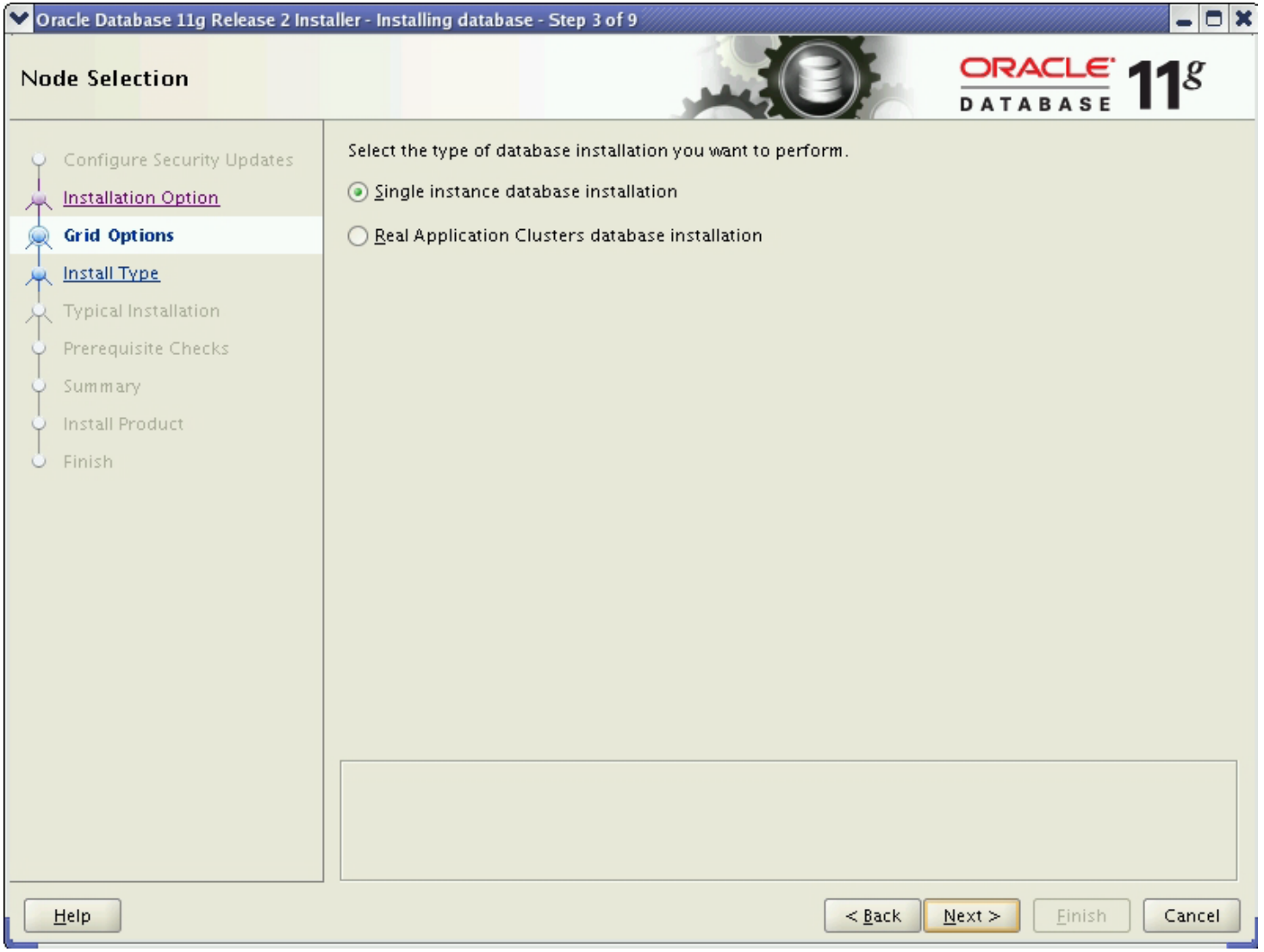
Installation 11*g* Release 2



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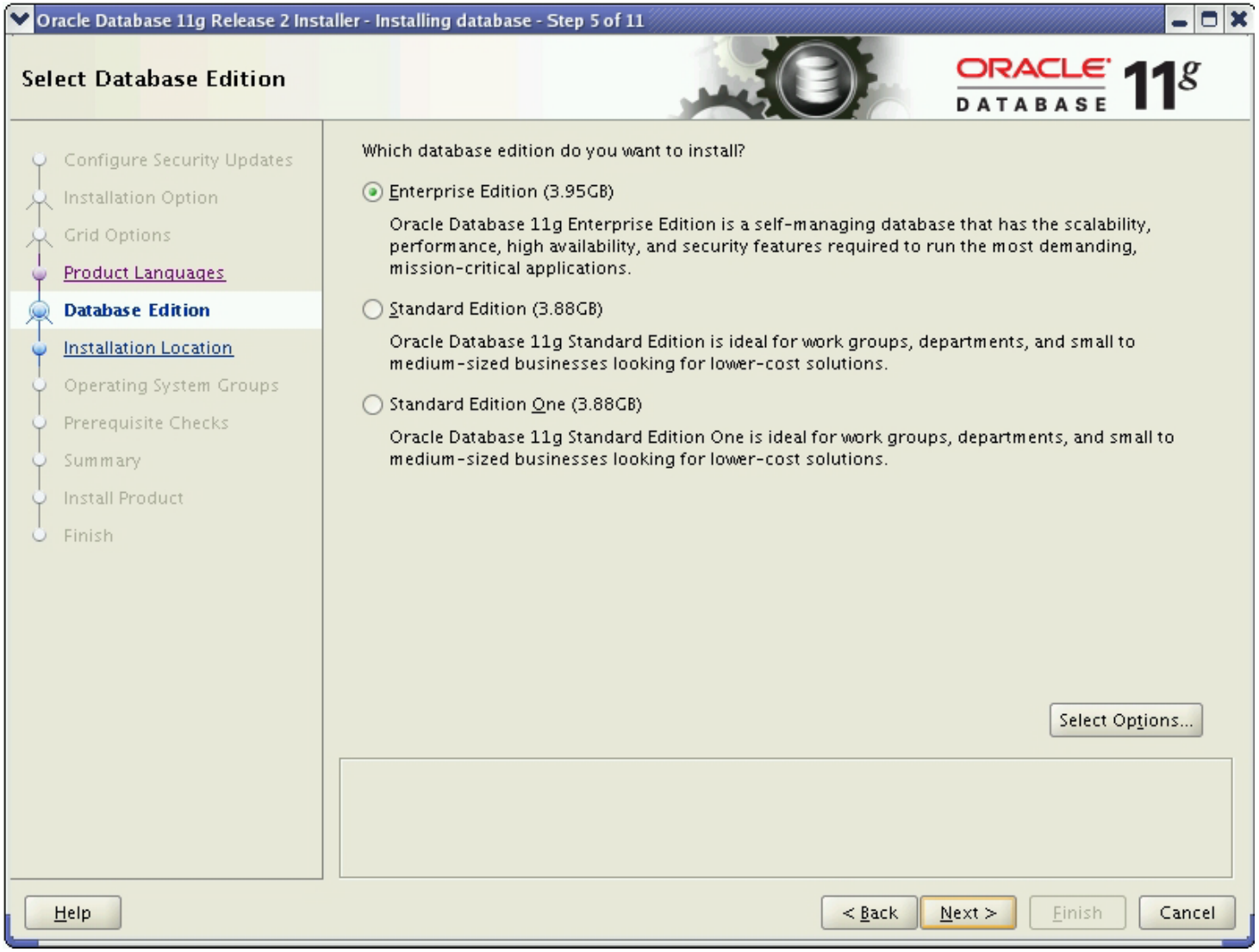
Installation 11*g* Release 2



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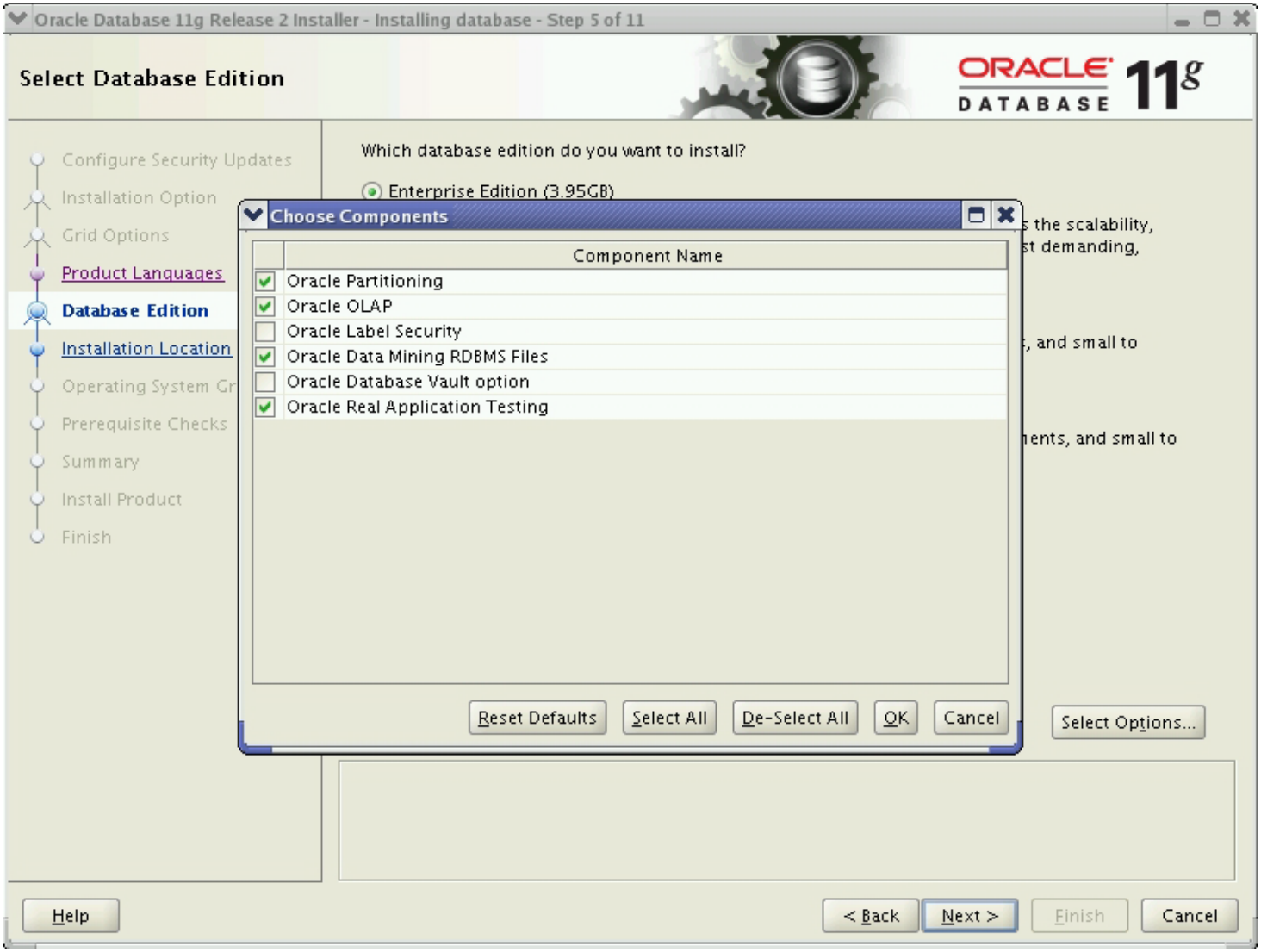
Installation 11*g* Release 2



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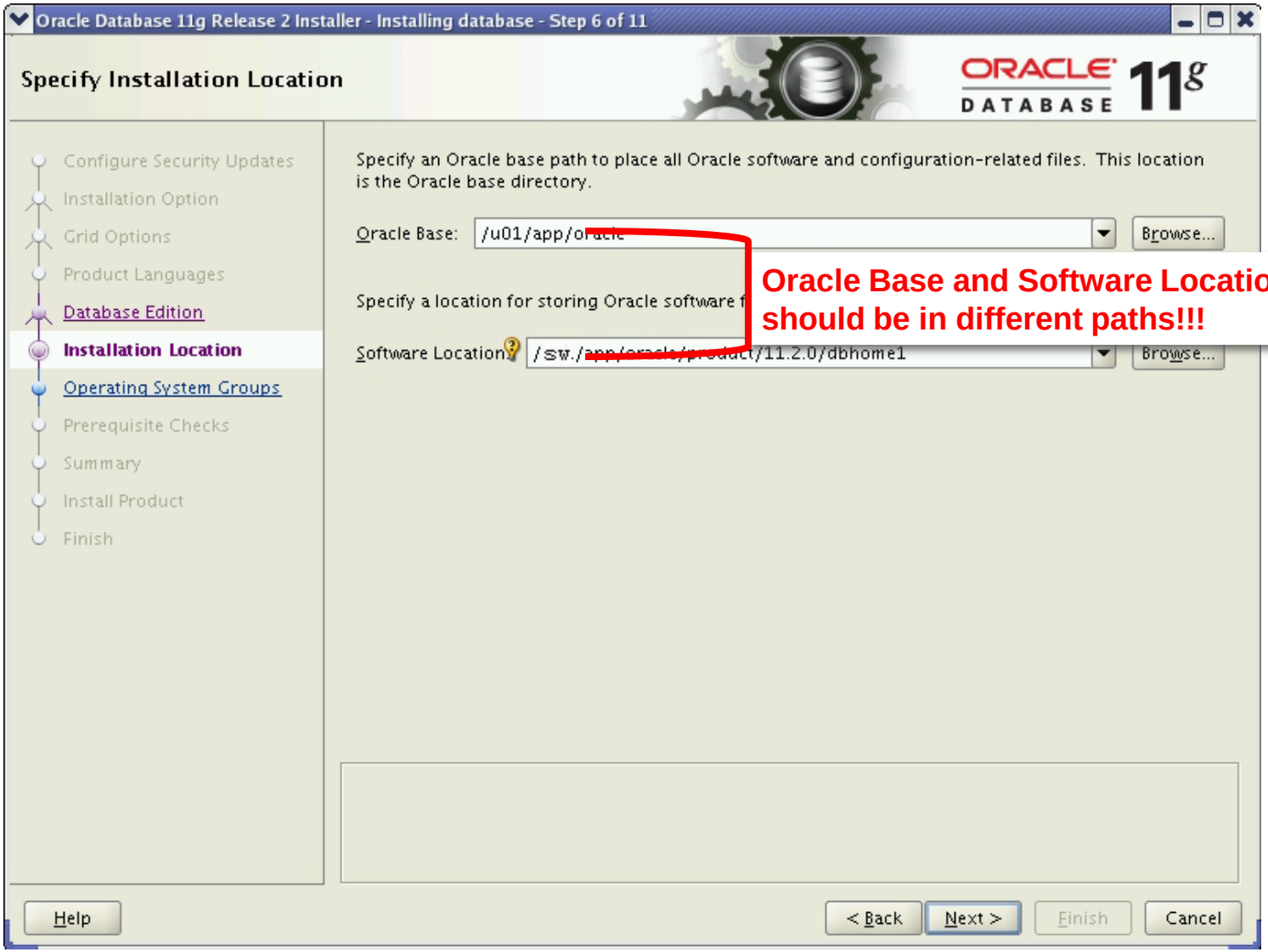
Installation 11*g* Release 2



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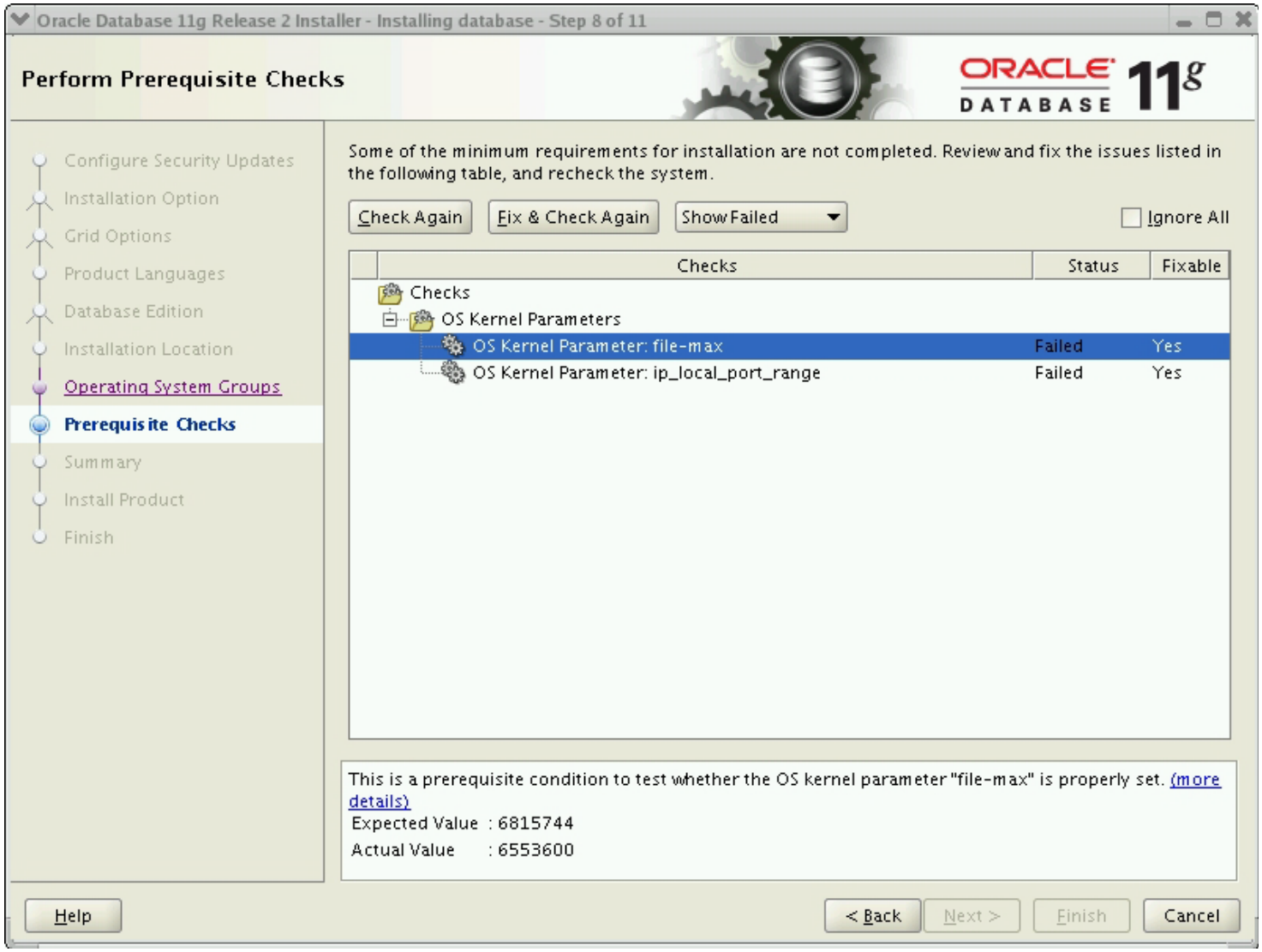
Installation 11*g* Release 2



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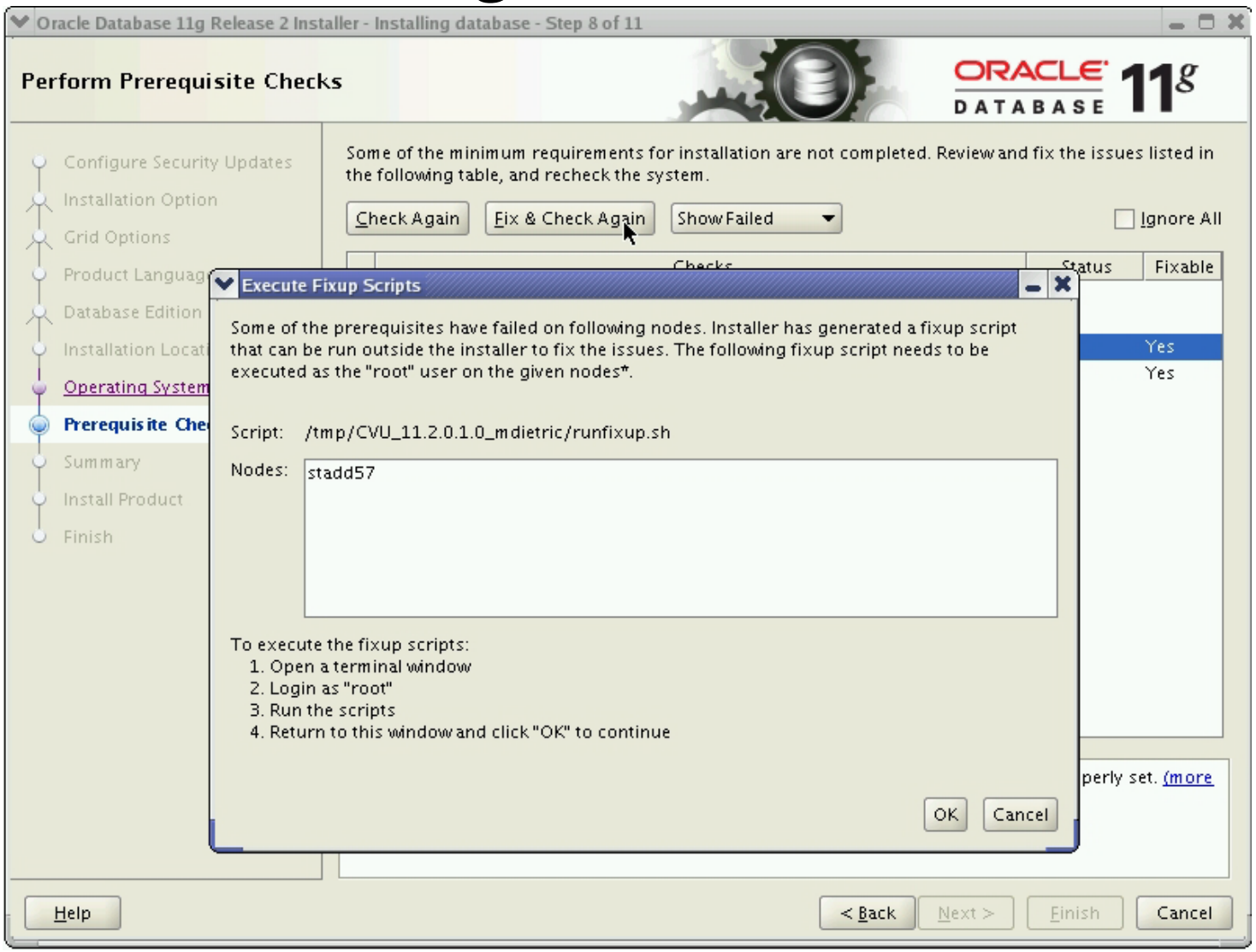
Installation 11*g* Release 2



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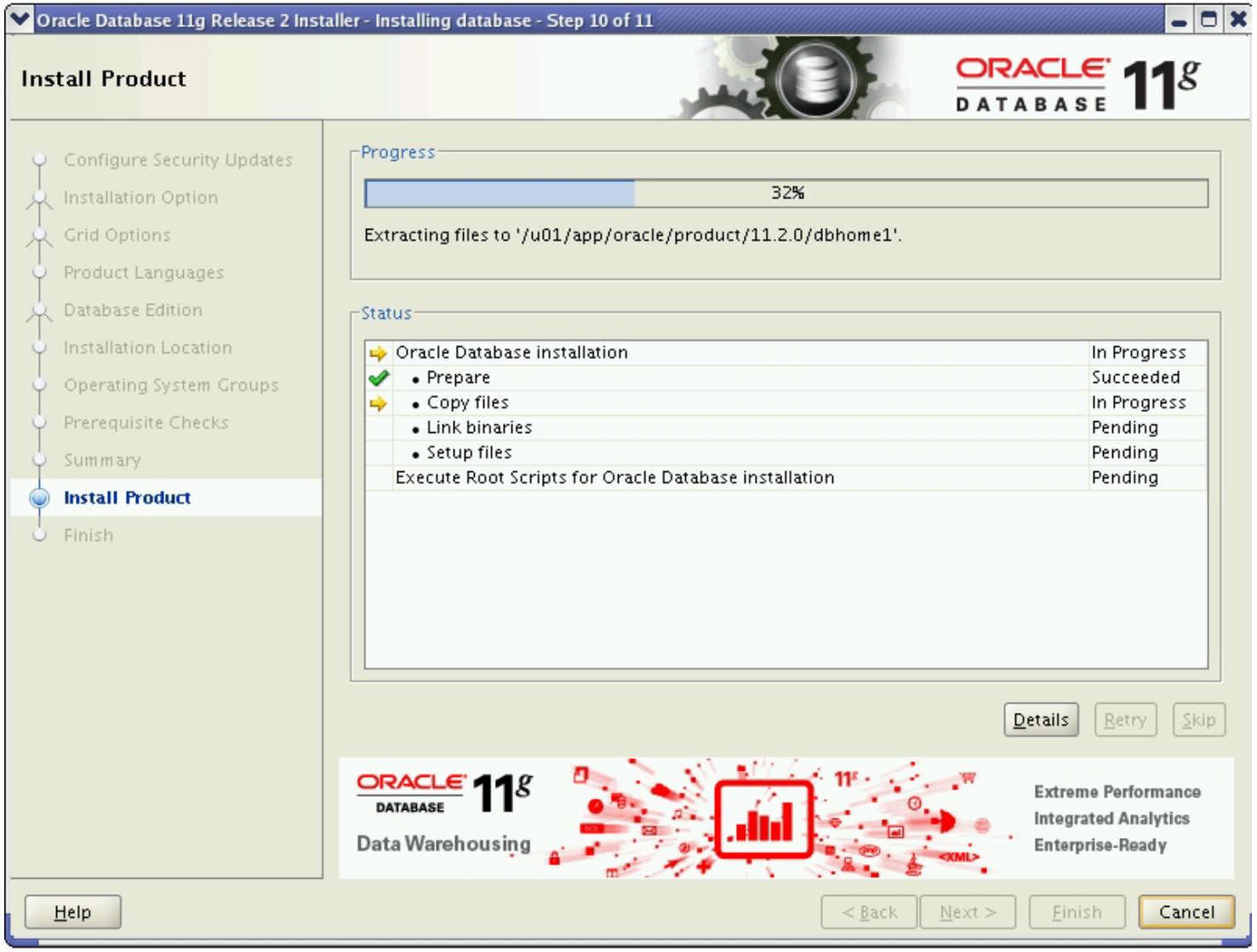
Installation 11*g* Release 2



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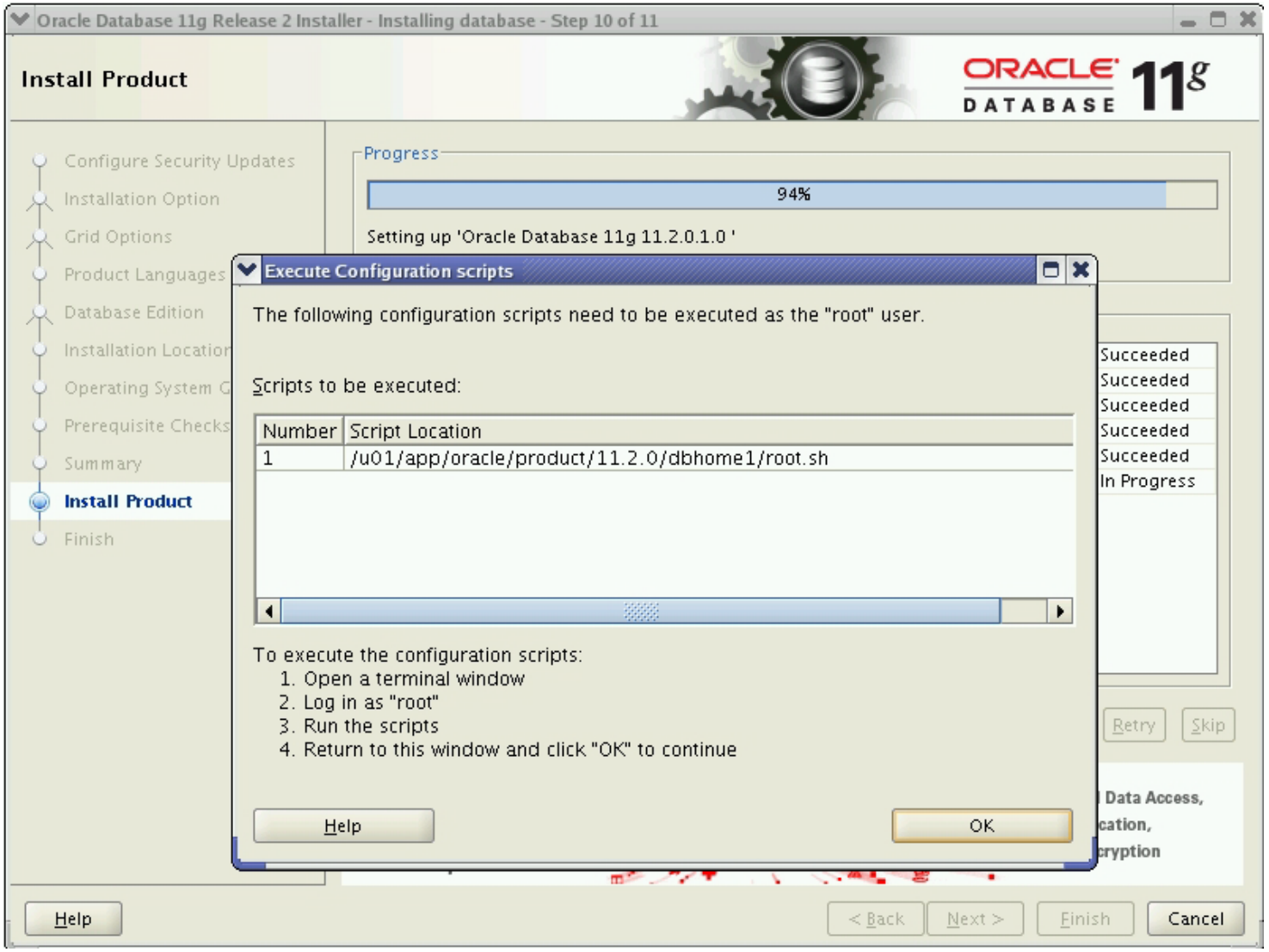
Installation 11*g* Release 2



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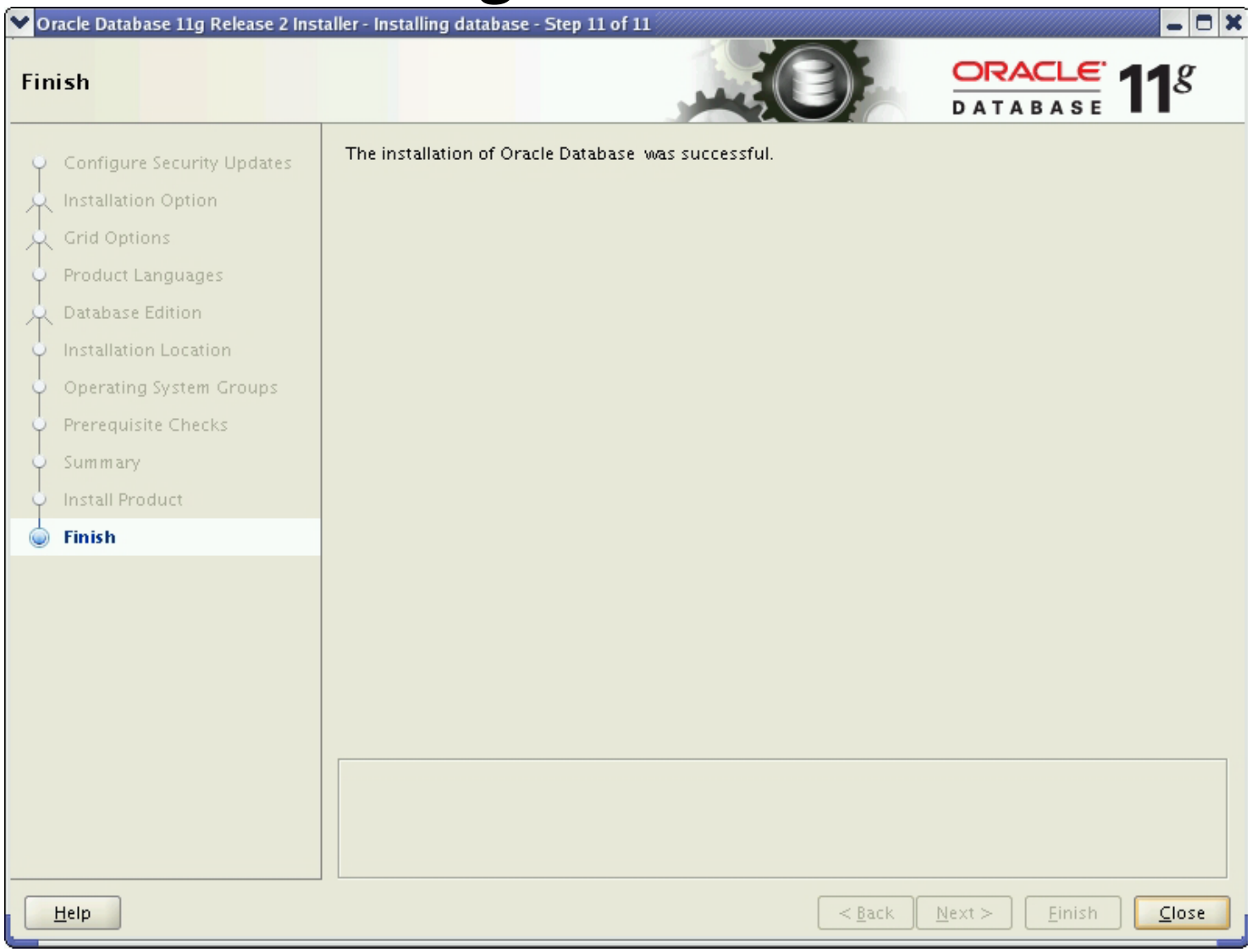
Installation 11*g* Release 2



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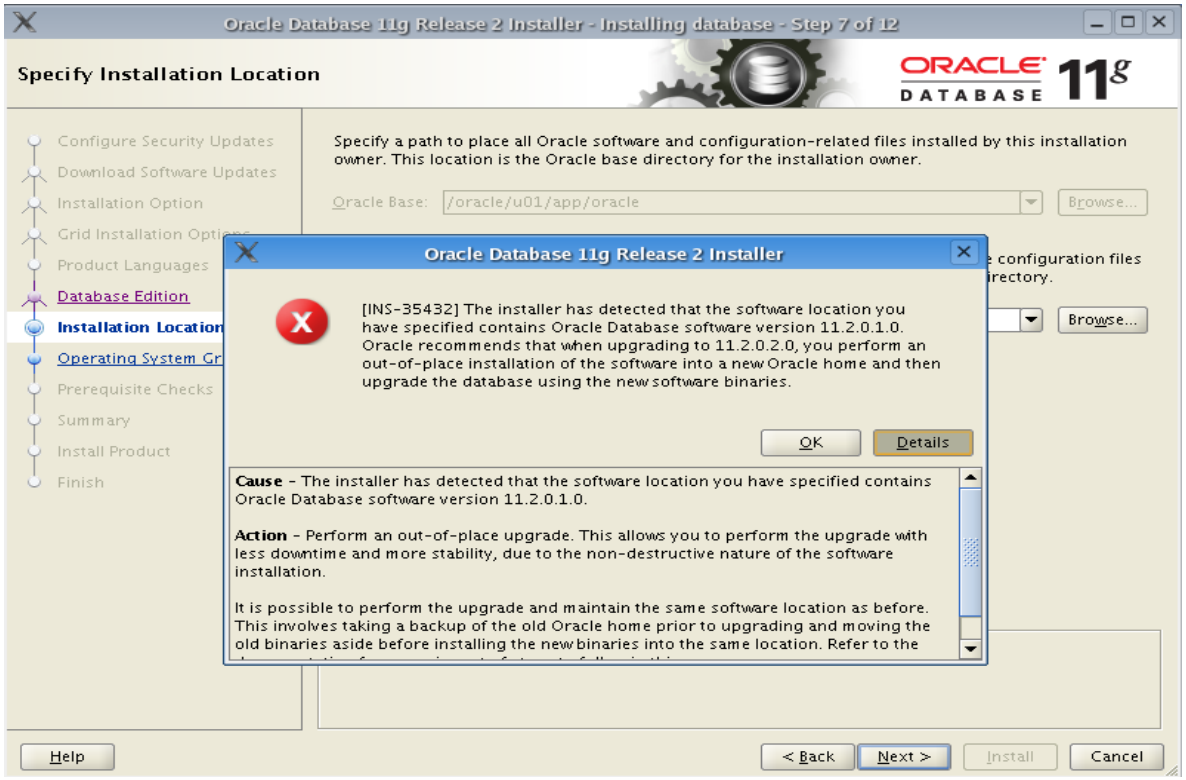
Patch Set Installation 11.2.0.2

- Starting with 11.2.0.2, patch sets will be complete kits
  - No need to install 11.2.0.1 as a prerequisite for 11.2.0.2
  - Out-of-place install is the default! If you specify an in-place patch upgrade from 11.2.0.1 to 11.2.0.2:



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Recommended Patches

Subject: **Introduction to Oracle Recommended Patches**

Doc ID: **756388.1** Type: **ANNOUNCEMENT**

Modified Date : **16-JUL-2009** Status: **PUBLISHED**

Introduction to Oracle Recommended Patches

- What are Recommended Patches?
- Benefits of Recommended Patches
- Common Questions

What are Recommended Patches?

Oracle has introduced a set of Recommended Patches which make it easier for customers to obtain and deploy fixes for known critical issues encountered in targeted environments and configurations. As part of Oracle's overall maintenance strategy, these provide proactive patch recommendations to customers seeking to upgrade or to improve the stability of their current environments. Customers are advised to install Recommended Patches that apply to their environment.

Recommended Patches are available for products listed below. For details, please review the My Oracle Support notes.

Product	My Oracle Support Note
Oracle Database	Note 756671.1
Oracle Enterprise Manager	Note 822485.1
Oracle Fusion Middleware	Note 859115.1

This note will be updated as Oracle announces Recommended Patches for other Oracle products.

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Recommended Patches

Oracle Recommended Patches -- Oracle Database (Doc ID 756671.1)

Modified 14-APR-2010 *Type* ANNOUNCEMENT

Oracle Recommended Patches -- Oracle Database

- Target Configurations
- Patch Availability
- Current Recommended Patches
  - 11.2.0.1 Current Recommended Patches
  - 11.1.0.7 Current Recommended Patches
  - 11.1.0.6 Current Recommended Patches
  - 10.2.0.4 Current Recommended Patches
  - 10.2.0.3 Current Recommended Patches
- Conflict Resolution
- On Request
- Known Issues
- References

Beginning with release 10.2.0.3, Oracle releases Recommended Patches for Oracle Database. For an introduction to Recommended Patches, see Note:756388.1.

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Patch Set Update (PSU) Installation

- Install PSUs as well
  - Note:854428.1: Introduction to Database Patch Set Updates
  - Database PSUs include:
    - Fixes for critical issues that may affect a large number of customers and that are already proven in the field
    - Critical Patch Update (CPU) fixes
  - Database PSUs do not include:
    - Changes that require re-certification
    - Fixes that require configuration changes
  - Typically 50-100 new bug fixes – ***usually*** cumulative
  - Guaranteed to be RAC rolling installable
  - Will be released 4x per year on the same schedule as CPUs

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Important Alerts?

- Note 161818.1

Oracle Database Releases Status Summary

Release (Click to see Details)	Current Patch Set	Next Patch Set	Premier Support Ends	Extended Support Ends	Notes
11.2.0.X	11.2.0.1	11.2.0.2	Jan-2015	Jan-2018	Base release is 11.2.0.1
11.1.0.X	11.1.0.7	None	Aug-2012	Aug-2015	Base release is 11.1.0.6 . 11.1.0.7 is the terminal 11.1 Patch Set
10.2.0.X	10.2.0.5	None	Jul-2010	Jul-2013 First year of Extended Support to be free of charge.	10.2.0.5 is the terminal 10.2 Patch Set. Upgrade to 10.2.0.5 is **not** required immediately upon start of Extended Support. The end patching dates for 10.2.0.4 can be found in Note:742060.1 .
10.1.0.X	10.1.0.5	None	Jan-2009	Jan-2012	10.1.0.5 is the terminal 10.1 Patch Set. 10.1 is now in Extended Support - see Note:761713.1
9.2.0.X	9.2.0.8	None	Jul-2007	Jul-2010 **Limited Extended Support is available from July 2010 to July 2012 on selected platforms.** See the "Extended Support" details here. First year Extended Support was free for 9.2	9.2.0.8 is terminal 9.2 Patch Set. The Free Extended Support period ended on 31-Jul-2008. See Note:392222.1

Key to coloring of above table:

Premier Support
Extended Support

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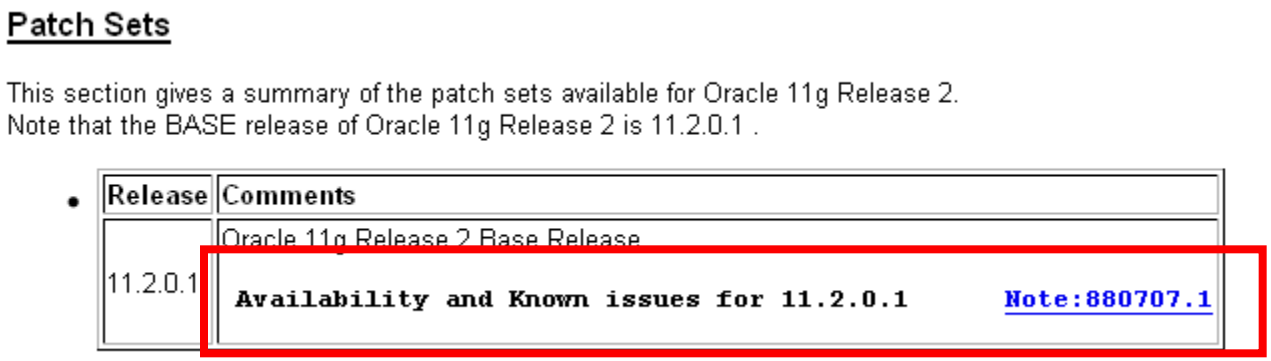
Upgrade Information / Alerts

- Note:880782.1

  Support Status and Alerts for Oracle 11g Release 2 (11.2.0.X)



Patch Sets

This section gives a summary of the patch sets available for Oracle 11g Release 2.
Note that the BASE release of Oracle 11g Release 2 is 11.2.0.1 .

Release	Comments
11.2.0.1	Oracle 11g Release 2 Base Release **Availability and Known issues for 11.2.0.1** **Note:880707.1**

Upgrade Information / Alerts

- Note 880707.1 Known Issues specific to the 11.2.0.1 Base Release
  Modified 13-JUL-2010 *Type* README *Status* PUBLISHED

Known Issues specific to the 11.2.0.1 Base Release

- See Note:880782.1 for Support Status and Alerts affecting 11.2.0 releases.

This note lists known issues specific to the 11.2.0.1 Base Release. This includes known install issues and alerts also significant bugs which are **introduced** in 11.2.0.1 for features which are also present in earlier releases. (Note this does not include bugs in 11.2 in new features introduced in this release).

11.2 Alerts / Issues

This section lists alerts and important issues relevant to 11.2 .

General Alerts / Issues

Note:1066229.1*	OERI[25027]/OERI[4097]/OERI[4000]/ORA-1555 in plugged datafile after CREATE CONTROLFILE in 11g
Note 1078406.1*	Corrupt blocks in 11.2 in table with unique key. OERI[kdBlkCheckError] by block check
9406095	ORA-371 from Database Upgrade Assistant (DBUA)

Upgrade Issues

9768907+	STARTUP UPGRADE turns off RECYCLEBIN with SPFILE
9304342	Dump (qmxdGetMatchingChildren_int) on XDB upgrade to 11.2
8668823	OERI[kokeeiix3] during database upgrade to 11g with XDB

Upgrade Information / Alerts

- Note 880707.1.1 Known Issues specific to the 11.2.0.1 Base Release

Current Recommended Patches

For information about Recommended Patches for the RDBMS see Note:756671.1 .

Patch Set Updates

Document	Description	Rolling RAC	Patch Download
Note:9654983.8	11.2.0.1.2 Patch Set Update (PSU)	Yes	Patch:9654983

Issues introduced in 11.2

This section lists bugs **introduced** in 11.2 (if any). As this is a base release only notable regressions in behaviour are listed.

Note 1078406.1*	Corrupt blocks in 11.2 in table with unique key. OERI[kdBlkCheckError] by block check
9768907I+	STARTUP UPGRADE turns off RECYCLEBIN with SPFILE
9711859+	ORA-600 [ktsptrn_fix-extmap] during extent allocation caused by bug 8198906
9734300	Dump under kxtivwt->kktget2 compiling PLSQL with DML and INSTEAD OF triggers
9573054	Dump (in kprccu) in Queue Monitor process
9382101	Unnecessary trigger traces "Dumping Sorted Master Trigger List"
9217629	Dump / wrong results with fix for bug 6467270 and encryption
9202351	ORA-904 from SQL involving CONNECT BY
9119731	OERI [510] [cache buffers chains] can occur during block recovery
9052506	Null-Aware Anti Join (NAAJ) is not used on DML
8692170	SubOptimal Execution Plan with Join Factorization enabled.

Recommended OS patches

- Note:169706.1: OS Installation and Configuration

Oracle Database on Unix AIX,HP-UX,Linux,Mac OS X,Solaris,Tru64 Unix

Jump to:
AIX
HP-UX (PA-RISC and Itanium)
Linux x86
Linux x86-64
Linux Itanium
Linux on Power
Linux on zSeries
Mac OS X (PowerPC and x86-64)
Solaris (SPARC and x86-64)
Tru64
Pre-Installation Scripts
OPatch
Related Documents
OS Specific Commands
Change History
Note 43208.1 Certified Compilers
Note 223718.1 Oracle Server Availability and Certification MATRIX
@Linux Project Group - Browse The Contents of Linux Brands ISOs

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Time Zone Patches

- Taken from an Oracle internal information email:

In the Know News for Oracle Employees

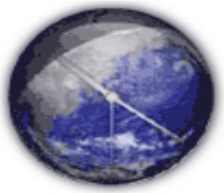
3 MAR 2010

MyOracle | In the Know Employee Fusion Special Edition | Oracle.com | Contact Us

ARCHIVES
In the Know
Archives

Take Note: Daylight Saving Time is Beginning and Ending in Several Countries

Approximately 80 countries observe some form of Daylight Saving Time, and many are moving their clocks backward or forward at this time of year. For example



- **Brazil** Daylight Saving Time ended in most locations on **February 21**, 2010 (clocks moved back one hour).
- **U.S. and Canada** Daylight Saving Time begins in most locations on **March 14**, 2010 (clocks move forward one hour).
- In many **European countries**, Daylight Saving Time begins on **March 28**, 2010 (clocks move forward one hour).
- **Australia** Daylight Saving Time ends in some locations on **April 4**, 2010 (clocks will move back one hour).

China, India, and Japan are three of many countries that are not observing any form of Daylight Saving Time in 2010. For more details, view global participation status.

Daylight Saving Time (or summertime as it is called in many countries) is a way of getting more light out of the day by advancing clocks by one hour during the summer.

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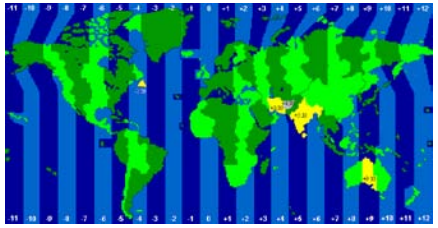
Time Zone Patches



- Why DST Time Zone patches? (DST: Daylight Savings Time)
  - Since 2007 DST definitions and Time Zone names have been changed several times
  - Time Zone versions by release:
    - Oracle 9*i*: TZ V1
    - Oracle 10.1: TZ V2
    - Oracle 10.2.0.1/2: TZ V2
    - Oracle 10.2.0.3: TZ V3
    - Oracle 10.2.0.4: TZ V4
    - Oracle 11.1: TZ V4
      - Source release requires TZ V4 – otherwise no upgrade will be possible
    - Oracle 11.2.0.1: TZ V11
      - Source release does not have to be patched. Time Zone conversion will be done in 11.2
      - Current version: TZ V13…

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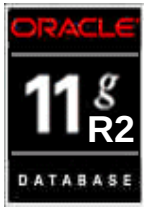
Time Zone Patches - 11*g* Release 2



- Upgrade to Oracle Database 11*g* Release 2:
  - New 11.*2*-$OH has time zone V11
  - No need to patch the source $OH
  - Determine whether TimeZone updates are needed: Note: 815679.1
  - Oracle recommends that you adjust the time zone version whether or not you use the `TIMESTAMP WITH TIME ZONE` data type
    - This data type may be used in system tables
    - Conversion done after the upgrade
    - See Note: 977512.1
    - Package **`DBMS_DST`**

```
(1) DBMS_DST.BEGIN_PREPARE(<tz-version>)
    DBMS_DST.FIND_AFFECTED_TABLES
    DBMS_DST.END_PEPARE
    => select * from DST$AFFECTED_TABLES;
(2) DBMS_DST.BEGIN_UPGRADE
    DBMS_DST.UPGRADE_DATABASE
    DBMS_DST.END_UPGRADE
```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Summary

- Upgrade to Oracle Database 11g Release 2 is easy
- Stable database release
- Great features
- Let's go ... :-)

- Any questions – would like to become an Oracle 11*g*R2 reference customer? Let us know about your upgrades ...
  - **Roy.Swonger@oracle.com**
  - **Carol.Palmer@oracle.com**
- Get the latest copy of the workshop slides at
  - **http://blogs.oracle.com/UPGRADE**

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