

AP on Oracle

Development Update

November 17th, 2011

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Development Manager

Platforms Oracle & Informix

Platform Solaris

G



ORAC



nda

10g @ SAP

11g @ SAP

RAC

Linux Support

ools



Oracle 10g @ SAP



ORAC

on Oracle 10g Supported Releases

Patchsets <= 10.2.0.4

no longer supported!

Support Period 10.2.0.4 ended July 31st, 2011

Must be **upgraded** to 10.2.0.5 to be eligible

for Extended Support

Patchset 10.2.0.5

Supported on **all** OS platforms

SAP Bundle Patches (SBP)

- September 13th, 2011 SBP now available
- Contains PSU 4 for 10.2.0.5 (10.2.0.5.4)

on Oracle 10g Oracle 10g Extended Support

Extended Support Fees

Extra charged support for Oracle 10.2
ended on July 31st, 2011
is now being extra-**charged** for
Oracle 10.2 Extended Support

Extra Support Fees

on platforms where Oracle 11g is not
available:

Windows IA64
Linux IA64
Linux on Power



Extended Support Availability

For patchset 10.2.0.5 only

Support until **July 31st, 2013**

- both **charged** and **free**

Detailed Info

See SAP Note [1110995](#)

Conditions similar to Oracle 9.2 Extended
Support



Oracle 11g @ SAP



ORAC

ication Completed

Database 11.2 Release 2 (11.2) **only**

SAP note [1398634](#) note for details

limitations for HP-UX on Itanium

(SAP note [1575609](#))

ed SAP Products

products on 640_EX2 kernel

er **only**

stricted to products which are in SAP Extended
tenance at least until end of 2010

OS Platforms

SAP 11.2 certification available on **all** platf

- **Except:** Windows IA64, Linux IA64,
Linux on Power
 - These are not planned by Oracle

Oracle 11.2 Instant Client

SAP-certified since February 2011

Do not forget to **update** client from 10.2 to
to get out of Oracle 10.2 Extended Support
obligation!

on Oracle 11g

Oracle 11.2 Patchset/PSU Schedule by SAP

Patchset 11.2.0.2

Patchset for Oracle 11.2

Released on November 10th, 2010 via SAP
Bundle

Availability

General availability since mid January 2011

Downloads available since May 10th, 2011

September 2011 SAP Bundle Patch for Oracle
contains PSU 3 for 11.2.0.2 (11.2.0.2.3)

Patchset 11.2.0.3

2nd Patchset for Oracle 11.2

– No release statement yet –

New SAP projects should start on 11.2.0.2 or higher only

Notes

- Oracle Database 11g: Integration in SAP Environment
- Release of Oracle 11.2 for older SAP Releases
- Oracle 11.2.0: Central Technical Note
- Oracle 11.2.0: Current Patch Set

Early Updated

of every month

- Oracle 11.2.0: Patches/Patch Collections for 11.2.0
- Oracle 11.2.0: Database Parameter Settings

New Oracle 11.2 Features

- [1436352](#) Oracle 11g Advanced Compression for SAP Systems
- [1426979](#) Oracle 11g: SecureFiles – The New Way to Store Large Objects
- [1416773](#) Oracle Direct NFS
- [1550133](#) Oracle Automatic Storage Management (ASM)

ation and Upgrade

- Oracle 11.2.0: Troubleshooting the Database Upgrade
- Oracle 11.2.0: Troubleshooting the Software Installation
- Oracle 11.2.0: Instant Client
- Oracle 11.2.0: Upgrade Scripts

Tools relevant for Oracle 11.2

- [1430669](#) BR*Tools Support for Oracle 11g
- [1027012](#) MOPatch – Install Multiple Oracle Patches in One

Oracle 11.2 Database Upgrade Guides

<http://service.sap.com/instguides> → Database Upgrades → Oracle

Advanced Compression

Table compression

File compression

Backup compression

Guard Network compression

Pump Export compression

License for Advanced Compression Option

required

ASFU license includes ACO

Index Compression

– Already supported by SAP
(since version 10g)

No additional license required

Oracle Feature Availability – Space (II)

View Space Savings

CO on customer databases

	Without Compression [GB]	With Compression ¹⁾ [GB]	Space Savings [Factor]
Database ²⁾			
ECC 6.0	4,782	1,976	2.4
BI 7.0	1,413	543	2.6
CRM 7.0	950	334	2.8
RMAN Backup ³⁾	2,817	667	4.2
Export Data Pump	973	156	6.2

1) incl. other space optimizations 2) fully reorganized 3) for compressed database

Implementation Guidelines for compression technologies in SAP environments

with Index Compression

Improves R/3
performance **the most**
of all database access
in R/3 environments is
index-based, especially
for large range scans
to **20%** disc space
reduction for complete
database

2 ▶

Implement OLTP Table Compression

- No real query performance benefit in R/3 environments
- Provides very good disc space savings

3 ▶

Implement SecureFiles Compression

- Very important for SAP applications like CRM or XI/PI that store large (uncompressed) amounts of data

4 ▶

RMAN Backup Compression

- Additional disk space savings (even if database tables and indexes are already compressed)

Features

Tablespace encryption

File encryption

Backup encryption

PL/SQL encryption

Guard Secure Redo Transport

License

All encryption functionality requires **license** for Advanced Security Option (ASO)

- ASO license is included in SAP ASFU license scope

Oracle 11g News for SAP Oracle Database Vault – Update

Deployment Strategy

Required for all customers in Controlled
Deployment mode

Interested customers need to open SAP
Support message to use Database Vault
(Component BC-DB-ORA-DV)

System Requirements

Requirements if starting now:

Oracle 11.2.0.2

7.00 based kernels, i.e. ECC 6.0, BI 7.0,
SAP 5.0, ...

Detailed SAP-specific Documentation

Whitepaper on SDN and OTN

SAP Notes:

[1355140](#) Oracle 10.2.0: Oracle Database Vault

[1358126](#) Oracle 10.2.0: Patches for Oracle Database Vault

[1358277](#) Oracle 10.2.0: Configuration Scripts for Database

Pricing

Different pricing models for SAP customers

Depending on Oracle database licensing model
(ASFU or Oracle Full License)

Oracle 11g SAP Support for SAP

Platforms

ACFS available on all platforms

Windows/Linux since beginning of February 2011

Windows from end of September 2011

Requirements

Oracle 11.2.0.2, or higher

Oracle Grid 11.2.0.2, or higher

kernel 6.40 or higher based SAP releases

Instances and Clustering

Single instance and RAC Support

ASM required for RAC installations with ASM
(not available on HP-UX)

Tools

BR*Tools ASM Support is **complete**

- Available as of BR*Tools 7.20 Patch **18**

Installation

Direct SAP installation support with ASM is
yet available

- Oracle tools based **migration** of existing systems
to ASM required

Documentation

For more information see

- Oracle ASM whitepapers on SDN
- SAP note **1550133**

Oracle 11g Database and Exalogic

Oracle Exadata X2/Database Machine

Supported for SAP since June 10th, 2011

x86-64 hardware only

Oracle Linux (mandatory), OR

Solaris 11 (Express)

Oracle 11.2.0.2 or later required

Supported for NW 7.0 or higher based SAP

products, **Unicode** only

For details see SAP note [1590515](#)

Oracle Exadata License required

Oracle Exalogic X2

Supported for SAP since August 16th, 2011

In combination with Exadata only!

- x86-64 hardware only
- Oracle Linux (mandatory)
- Solaris 11 planned for Q4 2011
- Oracle 11.2.0.2 or later required on Exadata
- Supported for NW 7.0 or higher based SAP products, **Unicode** only

For details see SAP note [1617188](#)



Oracle RAC



ORAC

e RAC

General Availability and Certification

General Availability (GA)

Announced by SAP in early January 2009
SAP/Oracle approval process for RAC projects
ended anymore
Valid for Oracle versions 10.2.0.4 and higher
Configuration requirements as defined in SAP
[527843](#) stay in place

Control (SAPCTL)

Clusterware solution SAPCTL for
starting SAP Enqueue Server, etc.

Certification

Certified for all SAP products based on kernel
46D_EXT and following

- See SAP note [527843](#)

**> 200 SAP customers
successfully productive on RAC**

ibility

able on all Unix/Linux and Windows

ms

All SAP kernels **640_EX2** and up

on to put OCR and voting disks on ASM

(only RAC 11.2 installations only)

grades from RAC 10.2 must still use shared file

systems for OCR and voting disks

SAPCTL 5.2 Available

manage and control SAP critical resources

with Oracle Clusterware

SAPCTL 4.2 **incompatible** with Clusterware 11.2

Clusterware 11.2

- New Clusterware configuration!
- Same supported technology stacks as hitherto stay in place
- See SAP on RAC 11.2 whitepaper and SAP note [527843](#) for details

**New RAC 11.2 for SAP
Whitepaper on SDN**
– Updated March 2011 –



Oracle Linux Support



ORAC



Application

Supported for all SAP products based on
SAP kernel **7.x**
on SAP application and database servers)

Platforms

Supported on **64-bit** platforms **only**

Requirements

Minimum Oracle database version 11.2.0.2

Versions

Oracle Linux **5**

- Update 5 and Update 6 **supported**
- Both RHEL compatible and Unbreakable Enterprise Kernel (UEK)

Oracle Linux **6**

- Support **planned** for Q1 CY2012



BA Tools

Oracle Database Resource Manager for SAP (I)

higher database priority for a specific SAP dialog users/transactions

er dialog transactions should run with
t priority

quisites

11.2.0.2 or higher

kernel version 7.x or higher

Bundle Patch for Oracle 11.2.0.2 from
011 or higher

How It Works in Brief

- Workload Management uses the DBMS_RESOURCE_MANAGER package
- Workload Management is done via switching Oracle sessions between predefined consumer groups, to which different levels of resources are assigned
- Switching relies on rules defined by the SET_CONSUMER_GROUP_MAPPING subprogram in DBMS_RESOURCE_MANAGER
- SAP database layer for Oracle (DBSL) sends the SAP transaction details ('client_identifier' and application info) to the database

Oracle Database Resource Manager for SAP (II)

Performance

Performance Impact: less than **5%**

Priority switch decision happens with
hard priority

Options

ABAP/Java connection support

Support

Available as of SAP kernel release **7.x**

erpt

Conversion to new SecureFile LOBs

Action **'lob2lob'** within BRSPACE reorganization
compression can be activated with the same
n
ne only (by redefinition), not Offline (by
e/alter)

Support for new table compression 'DLTP'

be activated during table reorganization by
SPACE
e and LOB compression can be enabled at the
e time

New Features for Data Encryption (TDE)

- Changing the wallet password using 'orapki'
- Opening the Oracle wallet in Database Mount status
- Password protection for closing the Oracle w

Cleaning up new Oracle 11g Trace Files Diagnostic Directories

- Based on new Oracle 11g parameter **'diagnostic_dest'**
- Aware of new Oracle 11g trace file types, e.g. incident files

Automatic Storage Management



Support for Automatic Storage Management (ASM)

BR*Tools 7.20 Patch **18**

RMAN-based backup strategies only

for Oracle Managed Files (OMF)

SAP Note [1627541](#)

Configuration Changes

Users must follow new BR*Tools configuration

requirements (SAP note [1598594](#))

Users must log on to OS user 'oracle'

and set correct file permissions and SAP directory

structures ([sapprof](#), ...)

Major Affected Areas

Backup, Restore and Recovery

- RMAN-based combinations for parameters [backup_dev_tape](#), [[disk|tape_copy_cmd](#)]

Tablespace and File Management

- Use ASM disk groups instead of file names to allow for Oracle Managed Files
- New behavior for data file rename and move, tablespace rename

Oracle 11.2 Features in BR*Tools 7.20

es

Notes

- 9 BR*Tools Support for Oracle 11g
- 6 LOB Conversion and Table Compression with BRSPACE 7.20
- 9 Corrections in BR*Tools Version 7.20
- 4 Configuration of BR*Tools for SAP Installations on User 'oracle'
- 1 BR*Tools Support for Oracle ASM

on Oracle Developer Network

ent Page

www.sdn.sap.com/irj/sdn/ora

The screenshot shows the SAP Developer Network website. The main content area features a news article titled "SAP ON ORACLE" with a sub-headline "Oracle Exalogic and All SAP products based on Oracle Database 11g Exadata Database Machine". The article text states: "SAP NetWeaver 7.x that are also certified for use 2 can now be used with the Oracle and the Oracle Exalogic system. Only the the Oracle Exadata Database Machine. No Exadata Database Machine. SAP instances of any hardware architecture and operating Database Machine, see SAP Note more information on the Oracle Exalogic system, SAP products based on SAP NetWeaver 7.0x are supported for Oracle Linux 5 (as of Update 5) on x86_64 platforms and Oracle Database 11g Release 2. For more information, see SAP Notes 1565179 and 1567511." The article is dated "04 Apr 2011". To the right of the article is a sidebar with "SAP SAPHIRENOW" and "BOBJ PLANNING & CONSOLIDATION" sections. At the bottom, there is a "SUBSCRIBE TO OUR NEWSLETTERS" section with links to various newsletters and a "DOWNLOADS" section.

Forum

<http://forums.sdn.sap.com>

→ Database & Platforms
→ SAP on Oracle

The screenshot shows the SAP Community Network Forum. The page title is "SAP Community Network Forums » Database & OS Platforms » SAP on Oracle". The forum name is "Forum: SAP on Oracle". Below the forum name, there is a "Forum Dashboard" with links to "Your Control Panel", "Your Reward Points", and "Your Questions". The "Top 3 Contributors, last 30 days" are listed: 1. Orkun Gedik (172), 2. DatabaseSAP (64), 3. Stefan Koehler (62). Below this, there are links for "Post New Thread", "Watch Forum", "Mark All Threads as Read", and "Back to Forum List". The main content area shows a list of threads with columns for "Thread", "Author", "Views", "Replies", and "Last Post".

Thread	Author	Views	Replies	Last Post
Hot News - Veritas Filesystem: Block corruption with large LUNs	Aidan Constable	223	0	Aug 16
Oracle Exadata Now Certified by SAP	Aidan Constable	731	0	Jun 13
Hot News: Missing owner in menu "System -> Status"	Aidan Constable	700	0	May 31
SAP on Oracle now on Twitter & Facebook	Aidan Constable	2,251	0	Mar 3
Basis Wiki Space	Eric Brunelle	2,658	0	Oct 6

SAP on Oracle Twitter and Facebook

Twitter
<http://twitter.com/#!/SAPonOracle>

Suchen Hast Du bereits ein Konto? Einloggen

@SAPonOracle Germany
Keeping SAP on Oracle spick & span
<http://www.sdn.sap.com/irj/sdn/ora>

Textnachricht mit follow SAPonOracle an die Kurzwahl Deines Mobilfunkanbieters

Verfolgen
Anmelden

Bleib in Verbindung
Mache jetzt bei Twitter mit:

Vollständiger Name
E-Mail
Passwort
Anmelden

Entdecke, wem @SAPonOracle folgt

Über @SAPonOracle

14	1	66	3
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facebook

Email Password
Keep me logged in Forgot your password

Sign Up Facebook helps you connect and share with the people in your life.

SAP on Oracle Like

Product/Service

Wall

SAP on Oracle
Check the latest hot news affecting #SAP on #Oracle - "Veritas Filesystem: Block corruption with large LUNs" at <http://tinyurl.com/sdnsapora-notes>.

SAP COMMUNITY NETWORK **Key Notes for SAP on Oracle**
www.sdn.sap.com
Key notes include hot notes and notes on the current major Oracle releases, Oracle 10g, BR*Tools, and Oracle Database Interface on SAP.
August 16 at 12:43am · Like · Comment
Leonardo Parpal Roig, Orkun Gedik and 2 others like this.

SAP on Oracle
Check the start of Oracle Exadata certification by SAP at <http://tinyurl.com/sdnsapora>.

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Thank You!

