

SAP on Oracle

Development Update

June 2015

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DB Platforms Oracle & Informix
OS Platform Solaris

SAP SE

SAP

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Agenda

SAP on Oracle Database 11g

SAP on Oracle Database 12c

Oracle Database In-Memory

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Operating Systems Update

Miscellaneous



SAP on Oracle Database 11g



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SAP on Oracle Database 11g

Extended Support



Extended Support for Oracle Database 11g started 1 February 2015

1st year of Extended Support is free-of-charge

→ No charges until 31 January 2016

- Automatic participation
- Supported releases:
 - 11.2.0.4
 - 11.2.0.3 (until 27 August 2015)

For details see

- SAP Note [2098258](#)

SAP on Oracle Database 11g

Supported Releases



Patch Set 11.2.0.3

2nd Patch Set for Oracle 11.2

Released 12 December, 2011

- HP-UX PA-RISC available since June 2012
 - Windows available since 14 February, 2012
- May 2015 SBP is most recent and contains PSU 14 for 11.2.0.3 (11.2.0.3.14)
- Upcoming August 2015 SBP will be final

See SAP Note [1431799](#) for support dates

Patch Set 11.2.0.4

3rd and Final Patch Set for Oracle 11.2

Released 14 February, 2014

- General Availability since February 2014
 - Windows Cluster available since May 2014
- May 2015 SBP is most recent and contains PSU 6 for 11.2.0.4 (11.2.0.4.6)

See SAP Note [1431799](#) for support dates



SAP on Oracle Database 12c



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SAP on Oracle Database 12c

Certification



Oracle Database 12c Release 1 (12.1)

Certified for SAP NetWeaver based SAP products starting 31 March 2015

- Including:
 - Oracle RDBMS 12c
 - Oracle Grid Infrastructure 12c¹⁾
 - Oracle Real Application Clusters (RAC) 12c

Requirements

- Minimum Oracle version is 12.1.0.2 with initial SAP Bundle Patch (12.1.0.2.2)
- SAP Kernel 7.21_EXT or higher

For details see

- SAP Notes [2133079](#) and [1914631](#)

1) Support for both RDBMS 11.2.0.4 and 12.1.0.2, see SAP Note [1677978](#)

SAP on Oracle Database 12c

Supported Releases



Patch Set 12.1.0.2

1st and Final Patch Set for Oracle 12.1

Released 31 March, 2015

- All OS platforms available from start

June 2015 SBP is most recent and contains
PSU 3 for 12.1.0.2 (12.1.0.2.3)

See SAP Note [1915313](#) for support dates

SAP on Oracle Database 12c

Limitations



Restricted Feature Support

For the time being, certification does not cover the following features:

Feature	Planned for
Oracle Database 12c Multitenant ¹⁾	2016
Oracle Database 12c ADO/ILM ²⁾	end of Q3 – Q4/2015
Hybrid Columnar Compression for Exadata ^{2), 3)}	end of Q3 – Q4/2015
Oracle Database Vault	Q3/2015

1) requires new Multitenant Option 2) requires Advanced Compression Option 3) Automatic Data Optimization (ADO) prerequisite

SAP on Oracle Database 12c

Products Support



As of now, the following SAP products are certified with Oracle Database 12.1:
See the SAP Product Availability Matrix (PAM) for product versions released with Oracle 12c

CERTIFIED PRODUCTS¹⁾

SAP NetWeaver 7.0, 7.1, 7.3, 7.40, 7.50
SAP BW 7.0/7.0X, 7.1X, 7.20, 7.3X, 7.40, 7.50
SAP ERP 6.0
SAP CRM 7.0
SAP SCM 7.0
SAP SRM 7.0
Banking Services from SAP 6.0, 7.0, 8.0, 9.0
SAP Solution Manager 7.1, 7.2
SAP NW CE 7.1, 7.20
SAP NW PI 7.1

CERTIFICATION PENDING

SAP NW LVM
SAP MDM

1) including all corresponding EhPs

Features supported as of certification

The following features are available with initial certification:

- Advanced Index Compression¹⁾
 - Automatic prefix computation
 - Higher compression rate, ease of use
- Client-Server Network Compression¹⁾
 - Less network load between application servers and database instance(s)
- ACO Table Compression: Support for > 255 columns
- ACFS Support on Exadata
 - for SAP shared file system support (/sapmnt, etc.)

1) requires Advanced Compression Option

Features supported as of certification (continued)

The following features are available with initial certification:

- RAC: HA-NFS support with ACFS
 - Complete SAP HA solution for shared file system
- RMAN: Cross platform backup and restore
 - Easier heterogeneous platform migration
- Storage Snapshot Optimization
 - No more begin/end backup for certain snapshot technologies
- Active Data Guard Far Sync¹⁾
 - High performance zero data loss across large distance WAN
- Online Move Partition, Move a Datafile Online

1) requires Active Data Guard Option

SAP on Oracle Database 12c

Notes & Documentation



Entry Notes

- [2133079](#) Oracle Database 12c: Integration in SAP Environment
- [1914631](#) Central Technical Note for Oracle Database 12c Release 1 (12.1)
- [1915313](#) Current Patch Set for Oracle Database 12c Release 1 (12.1)

Regularly Updated

on 10th of every month

- [1915316](#) Database: Patches for Oracle 12.1.0.2
- [1888485](#) Database Parameters for Oracle 12.1.0.2

Oracle 12.1 Features

- [2138262](#) Oracle Database 12c Advanced Compression for SAP Systems
- [2178980](#) Using Oracle Database In-Memory with SAP NetWeaver based Products

Tools

- [2087004](#) BR*Tools Support for Oracle 12c

Installation and Upgrade

- [1915302](#) Database Software 12.1.0.2 Installation on Windows
- [1915301](#) Database Software 12.1.0.2 Installation on Unix
- [1915299](#) Troubleshooting Software Installation for 12.1.0.2

Upgrade Guides

Oracle 12.1 Database Upgrade



<http://service.sap.com/instguides>

- Database Upgrades
- Oracle

White Papers

- Real Application Clusters (RAC)
 - Upgrade of SAP NetWeaver Installation to Oracle Grid Infrastructure 12.1.0.2 with Oracle Real Application Clusters 12c Release 1
 - Providing High Availability for SAP Resources with Oracle Clusterware 11g Release 2 and Clusterware 12c Release 1
- Exadata
 - Using SAP NetWeaver with Oracle Database 12c on Oracle Exadata
- In-Memory
 - Using SAP NetWeaver with Oracle Database In-Memory



SAP on Oracle 12c

Oracle Database In-Memory



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Oracle Database In-Memory Certification



Oracle Database In-Memory

NEW! Certified for SAP since 30 June, 2015

Requirements

- Oracle Database 12c Release 12.1.0.2¹⁾ or higher
 - Including RAC 12c and Engineered Systems
- SAP NetWeaver 7.X with kernel 7.21_EXT or higher
 - In SAP DDIC < 7.40 SP12 limited IM support

For details see

- SAP Note [2178980](#)
- Oracle In-Memory white paper on SCN

1) with June 2015 SAP Bundle Patch (Unix) or Database Bundle Patch 12.1.0.2.6 (Windows)

SAP Products Support

- All SAP NetWeaver based products and solutions
 - ERP, CRM, SRM, SCM, BW, PI, ...
 - Industry solutions
- Check SAP Product Availability Matrix (PAM) for full list

APPROACH 1

Using the Database In-Memory Advisor

Situation

- Tables recommended/suitable for In-Memory are yet unknown

Action

- Run IM Advisor for recommendations
- Relies on Automatic Workload Repository (AWR) & SQL Tuning Set data
- See Oracle In-Memory white paper on SCN for detailed procedure

APPROACH 2

Table candidates for In-Memory are known

Situation

- Reports with long running queries processing large amounts of data have already been identified

Action

- Put these tables in IM column store
- Use SAP_IM_ADV package¹⁾ for column store sizing
- See Oracle In-Memory white paper on SCN for detailed procedure

1) included in SAP Bundle Patch

Index Design

Changes to SAP standard¹⁾ index design are not allowed:

- No dropping
- No setting invisible or unusable

Individual Columns

All columns of SAP standard tables must be loaded into In-Memory column store

- No loading of individual columns
- No exclusion of individual columns

Database Buffer Cache

Reducing buffer cache size in favor of IM column store is not allowed

- Always use additional memory for IM

SAP BW Aggregates

Dropping all aggregates from existing BW system is not recommended

- Aggregates are designed for providing good throughput in concurrent user environments

1) Custom indices in customer namespace are not affected, changes are allowed

Oracle Database In-Memory

requires the following licenses:

- Oracle Database In-Memory Option
- SAP ASFU customers purchase “Oracle In-Memory License Package”
 - See SAP price list for details

Oracle Database In-Memory Advisor

requires the following licenses:

- Oracle Full Use customers require licenses from
 - Oracle Tuning Pack
 - Oracle Diagnostics Packif Database In-Memory option has been deployed
- These packs are included in SAP ASFU license



Engineered Systems Update



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Engineered Systems Update

Exadata | Exalogic & Co.

Oracle Exadata Database Machine X2 – X5

Support for X2-2|8, X3-2|8, X4-2|8 and X5-2

- Exadata license required
- See SAP Note [1590515](#)
- Oracle Exadata white paper on SCN

Oracle Exalogic X2 | X3 | X4

Support for X2-2, X3-2 and X4-2

- Virtual Exalogic (using Oracle VM)
- Only in combination with Exadata
- See SAP Note [1617188](#)

Oracle SPARC SuperCluster

Supported for SAP since 2012

- See SAP Note [1693680](#)

Oracle Database Appliance (ODA)

Support for V1, X3-2 and X4-2

- See SAP Note [1760737](#)
- Oracle ODA white paper on SCN

Engineered Systems Update

Virtual Compute Appliance

Oracle Virtual Compute Appliance (OVCA)

Engineered system designed for virtualization

Supported for SAP since September, 2014

- Starting from OVCA Version 1.1.3
- Based on Oracle VM

Guest Operating Systems Support

- Oracle Linux 5, 6 and 7
- Oracle Solaris 10 and 11

For details see

- SAP Note [2052912](#)

SAP Products Support

- All SAP products and database versions certified for supported guest OS
- Check SAP Product Availability Matrix (PAM)



Operating Systems Update



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Operating Systems Update

Oracle | Red Hat Linux 7

Certification

Certified for SAP products based on SAP NetWeaver 7.X

- x86-64 platforms only

	Oracle Linux 7		Red Hat Enterprise Linux 7
	Red Hat Compatible Kernel	Unbreakable Enterprise Kernel	
SAP Certified	yes	yes	yes
Minimum Oracle Version	11.2.0.4		11.2.0.4
Unicode only	yes		no
See SAP Note	1565179		1114181



Miscellaneous



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BR*Tools 7.40

Enhancements in BRBACKUP and BRRECOVER

BRBACKUP

- Consistent Online Backup of Standby Database
- Backup of Standby Database for a Primary Oracle RAC Database
- Creation of Copy of ASM Databases
- Creation of a Single Instance Database from a RAC Database

For details see

- SAP Note [1844380](#)

BRRECOVER

- Reconfiguration of Online Redo Log Files during a Recovery

For details see

- SAP Note [2086966](#)

BR*Tools 7.40

Support for Oracle 12c



BR*Tools 7.40 Patch 14

- Move Data File Online
- Online MOVE PARTITION
- Support for Advanced Index Compression
- Compression of tables with > 255 columns
- Reorganization of tables with long names
- Oracle Wallet in ASM

BR*Tools 7.40 Patch 17¹⁾

- Oracle Database In-Memory

For details see

- SAP Note [2087004](#)

1) planned for August/September 2015

SAP on Oracle

SAP Community Network

Content Page

<http://scn.sap.com/community/oracle>

The screenshot shows the SAP Community Network interface. At the top, there's a navigation bar with 'SAP Community Network', user info 'Hi, Guest', and links for 'Log On' and 'Join Us'. A search bar is present. Below this is a menu with categories like 'Products', 'Services & Support', 'About SCN', 'Downloads', 'Industries', 'Training & Education', 'Partnership', 'Developer Center', 'Lines of Business', 'University Alliances', 'Events & Webinars', and 'Innovation'. The main content area is titled 'SAP on Oracle' and has tabs for 'Overview', 'Content', 'People', and 'Subspaces'. The 'Overview' tab is active, showing an image of a geodesic dome, 'Featured Content' with links to Oracle Database 12c certification, SAP on Oracle Development Update, BR*Tools patches, and Oracle Linux 7 certification. It also lists 'Actions' (View feeds, The SCN Rules of Engagement), 'Unanswered Questions', and 'Popular Tags' (10g, 11g, backup, basis, brspace, brtools, database).

Forum

<http://scn.sap.com/community/oracle/content>

The screenshot shows the SAP Community Network forum interface. It has the same top navigation bar as the content page. The main content area is titled 'SAP on Oracle' and has tabs for 'Overview', 'Content', 'People', and 'Subspaces'. The 'Content' tab is active, showing a list of forum posts. The 'Actions' section at the top right includes 'All Content (11044)', a search filter, and sorting options. The forum posts are displayed in a grid, with each post showing a title, a snippet of text, and the user who last modified it. The first post is titled 'SAP system can not connect to Oracle stan...', the second is 'Key Notes for SAP on Oracle', and the third is 'SOFFCONT1 table reorganization error'. Below the forum posts, there's a 'Sponsored Content' section featuring 'Hitachi Data Systems' and three sponsored articles: 'Who use SAP Partitioning Engine for Oracle?', 'Oracle Data Guard logs chinning stoned', and 'SSFS (Secure Storage In File System) config'.

SAP on Oracle Twitter

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- Product Certifications
- Best Practices
and a lot more...

The screenshot displays the Twitter profile for 'SAP on Oracle' (@SAPonOracle). The profile picture is a server room with a white SAP logo overlaid. The bio states: 'SAP on Oracle @SAPonOracle News and info for SAP customers running the Oracle database'. The page shows two tweets: one from May 19 about SAP installations and upgrades with Oracle Database 12c, and another from April 28 about SAP on Oracle conversion of compressed tables for Oracle 12c. The page also features a 'Follow' button, 'Tweets & replies' tab, and a 'New to Twitter?' sign-up prompt.



Thank You!



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