



# SAP on Oracle

## Development Update

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PUBLIC



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# Agenda

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Engineered Systems

SAP on Oracle Database 12c

SAP on Oracle Database 18c

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# Infrastructure **as a Service**



Infrastructure as a Service

## Oracle Cloud Infrastructure Compute

### Certification

Supported with SAP as follows:

- Oracle Database 11.2.0.4, 12.1.0.2<sup>1</sup> and 12.2.0.1
- All features/options<sup>2</sup> supported for SAP on premise are available with Oracle Cloud Infrastructure
- Oracle Linux 6 or 7<sup>3</sup>

Supported SAP products:

- SAP NetWeaver 7.X<sup>4,5</sup> and products based hereupon
- SAP Business Objects BI platform
- SAP SCM APO-liveCache

For details see

- SAP Notes 2474949 and 2520061
- Knowledge Base Article 2650732
- Oracle white paper in SAP Community

<sup>1</sup> Minimum SAP Bundle Patch August 2017 <sup>2</sup> except RAC, except ASM <sup>3</sup> both UEKR3 and UEKR4 <sup>4</sup> Unicode only

<sup>5</sup> Minimum SAP Host Agent 7.21 patch level 30 for Bare Metal and patch level 35 for Virtual Machine Shapes

# Infrastructure as a Service

## Oracle Cloud Infrastructure Compute

CERTIFIED BARE METAL AND VIRTUAL MACHINE SHAPES <sup>1</sup>

Shape	OCPU	Memory	Database Storage	SAPS
BM.Standard1.36	36	256 GB	1 PB Block Storage	59,370
BM.DenseIO1.36	36	512 GB	28.8 TB NVMe <sup>2</sup>	59,520
BM.Standard2.52	52	768 GB	1 PB Block Storage	72,230
BM.DenseIO2.52	52	768 GB	51.2 TB NVMe <sup>2</sup>	72,230
VM.Standard2.1	1	15 GB	1 PB Block Storage	1,359
VM.Standard2.2	2	30 GB	1 PB Block Storage	2,717
VM.Standard2.4	4	60 GB	1 PB Block Storage	5,433
VM.Standard2.8	8	120 GB	1 PB Block Storage	10,865
VM.Standard2.16	16	240 GB	1 PB Block Storage	21,730
VM.DenseIO2.8	8	120 GB	6.4 TB NVMe	10,865
VM.DenseIO2.16	16	240 GB	12.8 TB NVMe	21,730

<sup>1</sup> No support for any virtualization technology on Oracle Cloud Infrastructure Bare Metal Compute instances <sup>2</sup> Block Volume Storage (up to 1 PB) can also be used

## Infrastructure as a Service

# Oracle Database Exadata Cloud Service (ExaCS)

### Certification

Supported with SAP as follows:

- Oracle Database 12.1.0.2 and 12.2.0.1
- All features/options supported for SAP on premise are available with Oracle ExaCS<sup>1</sup>
  - including RAC
- Oracle Linux 6

Supported SAP products (Database only):

- SAP NetWeaver 7.X<sup>2,3</sup> and products based hereupon
- SAP BusinessObjects BI Platform 4.2 and above

For details see

- SAP Notes 2614028
- Oracle white paper in SAP Community

### SUPPORTED ORACLE EXA-CS SHAPES AND MACHINE TYPES

Shape	# Cores per Node	Memory	Database Storage	SAPS
Exadata Quarter1.84/Quarter Rack X6	22	720 GB	84 TB on Storage Servers	32,350
Exadata Quarter1.84/Quarter Rack X6	84	720 GB	84 TB on Storage Servers	119,700
Exadata Quarter1.84/Quarter Rack X6	$22 \leq N \leq 84$	720 GB	84 TB on Storage Servers	$119,700 * N / 84$

<sup>1</sup> Minimum ExaCS release 17.4.2.2 <sup>2</sup> Unicode only <sup>3</sup> Minimum SAP Host Agent 7.21 patch level 35

# Infrastructure as a Service

## Microsoft Azure

### Certification

Supported with SAP as follows:

- Oracle Database 11.2.0.4, 12.1.0.2 and 12.2.0.1
- Single Instance only (no RAC)

Supported Operating System versions:

- Windows Server 2016<sup>1</sup>
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2012 R2 Service Pack 1
- Oracle Linux 7
  - including Oracle ASM Support **NEW!**

For details see

- SAP Notes 1928533 and 2039619

<sup>1</sup> Oracle Database 12.2 only



# Infrastructure as a Service

## Amazon Web Services

### Certification

Supported with SAP as follows:

- Oracle Database 11.2.0.4, 12.1.0.2 and 12.2.0.1
- Oracle Linux 6.4 or higher<sup>1</sup>
- Amazon Web Services (AWS) EC2 only
  - No support for AWS RDS
- Single Instance only (no RAC)

For details see

- SAP Notes 2358420 and 1656099

<sup>1</sup> Amazon Machine Image (AMI) must be based on Oracle Linux 6.4 or later

# Engineered **Systems**



# Engineered Systems

## Exadata & Exalogic

### CLUSTERED DATABASE AND STORAGE SERVER

#### Oracle Exadata Database Machine X2–X7

Support for X2-2|8 through X7-2|8

- Exadata license required
- Support for OVM **NEW!**

Minimum requirements:

- Exadata software version 18.1.6.0.0
- SAP Host Agent 7.21 PL 37

For details see

- SAP Note 1590515
- Oracle Exadata white paper in SAP Community

### CLUSTERED APPLICATION SERVER

#### Oracle Exalogic X2–X5

Support for X2-2 through X5-2

- Virtual Exalogic (using Oracle VM)
- Only in combination with Exadata

For details see

- SAP Note 1617188

Engineered Systems

## Database Appliance & Private Cloud Appliance

TWO-NODE CLUSTERED DATABASE SERVER

### Oracle Database Appliance V1–X7

Support for V1, X3-2 through X7-2 **NEW!**

For details see

- SAP Notes 1760737, 2290084, 2388511 and 2664704
- Oracle ODA white papers in SAP Community

ENGINEERED SYSTEM DESIGNED FOR VIRTUALIZATION

### Oracle Private Cloud Appliance X3–X7

Support for X3-2 through X7-2 **NEW!**

- Based on Oracle VM

For details see

- SAP Note 2052912

# SAP on Oracle Database 12c



# SAP on Oracle Database 12c Release 2 Certification

## Oracle Database 12c Release 2 (12.2.0.1)

### Certified for Business Suite based on SAP NetWeaver

- From 18 December 2017
- All platforms:
  - Oracle Cloud Infrastructure
  - On-Premise platforms<sup>1</sup>
  - Oracle Engineered Systems<sup>2</sup>
- Single Instance and Oracle RAC<sup>2</sup>
- First Oracle release to support Microsoft Windows Server 2016

### Minimum Requirements

- Oracle Database 12c Release 2 with initial SAP Bundle Patch<sup>3</sup>
- Oracle Clients 12.1 and 12.2
- Supported SAP Kernels 7.21\_EXT|7.22\_EXT or 7.45 and higher

### For details see

- SAP Notes 2133079 and 2470660

<sup>1</sup> AIX, HP-UX, Linux, Solaris, Windows <sup>2</sup> GI 12.2 with RDBMS 11.2.0.4, 12.1.0.2, 12.2.0.1 <sup>3</sup> November 2017 SBP

# SAP on Oracle Database 12c Release 2

## Supported Releases | Timeline

### Releases

#### Support for Oracle Database 12.2.0.1

- Base release is final release for Oracle 12.2
- August 2018 SBP is most recent
  - contains PSU 180717 for 12.2.0.1

#### For details see

- SAP Note 1915313

#### SUPPORT TIMELINE ORACLE DATABASE 12.2.0.1<sup>1</sup>

##### Premier Support

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Start	March 1, 2017
End	July 23, 2020

##### Extended Support

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**NO EXTENDED SUPPORT PLANNED FOR 12.2.0.1!**

<sup>1</sup> Status as of October 2018

# SAP on Oracle Database 12c Release 2

## Features

### DATA GUARD

- Fast Start Failover Max Protection
- DG Database Compare `dbms_dbcomp.dbcomp`
- DG `DATA_GUARD_SYNC_LATENCY` parameter

### SECURITY/ENCRYPTION

- Fully Encrypted Database
- TDE Tablespace Live/Offline Conversion

### MISCELLANEOUS

- Online Table Move
- Online Conversion Non-Partitioned Tables
- Restart Online Definition
- ILM/ADO Support with Multitenant
- Advanced Index Compression High
- RAC Multi Instance Redo Apply

and much more...



# SAP on Oracle Database 12c

## Products Support

The following SAP NetWeaver-based products are certified with Oracle Database 12c:<sup>1</sup>

See the SAP Product Availability Matrix (PAM) for product versions released with Oracle 12c

SAP NetWeaver 7.0, 7.1, 7.3, 7.4, 7.5

SAP BW 7.0/7.0X, 7.1X, 7.20, 7.3X, 7.4, 7.5

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

SAP LVM 2.1 and higher

SAP MDM 7.1<sup>2</sup>

<sup>1</sup> including all corresponding EhPs <sup>2</sup> 12.1 only, certification for 12.2 pending

# SAP on Oracle Database 18c



# SAP on Oracle Database 18c Certification Plans

## Oracle Database 18c (18.4.0)

Certification planned for Business Suite based on SAP NetWeaver 7.X

- Planned availability for SAP:

**End of 2018/Q1CY2019**

For details see

- SAP Note 2705272

Including:

- Oracle Database 18c
- Oracle Grid Infrastructure 18c
- Oracle Real Application Clusters (RAC) 18c
- Support for
  - all On-Prem platforms<sup>1</sup>
  - Oracle Cloud
  - Oracle Exadata/SuperCluster

Excluding:

- Oracle Failsafe for Windows<sup>2,3</sup>
- Support for OS platform SLES15

<sup>1</sup> Same OS versions as with Oracle 12.2 <sup>2</sup> planned for late Q1CY2019 <sup>3</sup> Includes Failsafe support for Microsoft Windows 2016

# SAP on Oracle Database 18c

## Minimum Requirements | Timeline

### Minimum Requirements

- Oracle Database 18c
  - Release Update (RU) 18.4.0
  - November SAP Bundle Patch on top of 18.4.0
- Oracle Instant Clients 12.1 and 12.2
  - Client 18c planned in CY2019
- Supported SAP Kernels 7.21\_EXT|7.22\_EXT or 7.49 and higher

### SUPPORT TIMELINE ORACLE DATABASE 18c

#### Premier Support

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Start	February 2018
End (Planned)	April 2021

#### Extended Support

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**NO EXTENDED SUPPORT PLANNED FOR 18c!**

# SAP on Oracle Database 18c

## Features

### DATABASE IN-MEMORY

2x–5x faster, extremely benefits SAP BW

- Dynamic thread-based scans
- Optimized arithmetic and native binary numbers using SIMD vectoring

### RECOVERY MANAGER (RMAN)

Easy and fast cloud migration

- DUPLICATE DATABASE [...] AS ENCRYPTED

### PERFORMANCE

Polymorphic Table Functions

- “Fast Data Access” option in SAP’s FOR ALL ENTRIES
- Profile parameter:  
rsdb/prefer\_join\_with\_fda = 0|1

### EXADATA

Increased Performance

- Undo Block RDMA Read
- Commit Cache

### MISCELLANEOUS

- ACFS resize and info storage
  - Online merge (sub-)partition
- and much more...

# Oracle **Release Strategy**



## Oracle Release Strategy

# Changes in Release Cycle and Naming

### Oracle is switching to yearly release cycle

One major database release per year

- Feature Releases
- Version naming based on release year
- Oracle 12.2.0.1 is last conventionally named release

### Oracle Database Bundle Patches to become “Release Updates” (RUs)

SAP Bundle Patch (SBP) concept remains unchanged!

- SBPs being based on RUs instead of DBBPs accordingly

### Cloud First

On-Premise release some months later

# Oracle Release Strategy

## Changes in Release Cycle and Naming

### Effects on Oracle Database Release 12.2

New naming convention means:

- Release 12.2.0.2 → will become Oracle Database **18**
- Release 12.2.0.3 → will become Oracle Database **19**

Both releases are treated under the umbrella of Oracle 12.2 for Lifetime Support

Oracle 19 is planned to be the last release for Oracle 12.2

For details see

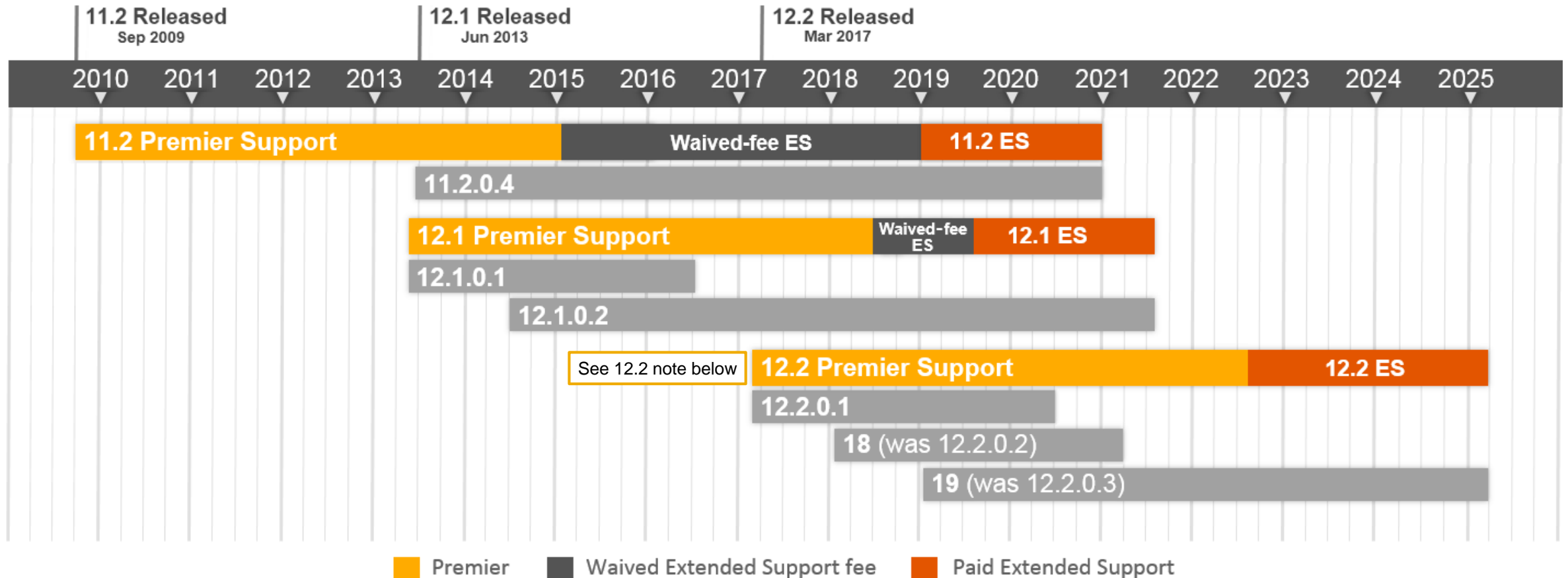
- SAP Note 2574651
- Oracle MOS Note 742060.1



# Oracle Release Strategy

## Oracle Database Release Roadmap

Source: Oracle MOS Note 742060.1, October 2018



**Release 12.2:** New releases will be annual and the version will be the last two digits of the release year. The release originally planned as 12.2.0.2 will now be release 18, and the release originally planned as 12.2.0.3 will be release 19. Releases 18 and 19 will be treated as under the umbrella of 12.2 for Lifetime Support purposes. The expectation is for Oracle Database 19 to be the last release (“long term support” release) for 12.2.

## SAP Certification Roadmap for Oracle Database 18c and 19c

See SAP Note  
2606828

### SAP certification of a new Oracle Database release...

...will start with availability on all on-premise platforms supported by SAP

– Linux, Windows, Solaris, AIX, HP-UX

...is planned within 6 months after the on-premise platform availability

...will cover all platforms

– Oracle Cloud Infrastructure, Engineered Systems, all on-premise platforms

#### ORACLE DATABASE AVAILABILITY TIMELINE

Oracle Database Release	Planned Availability by Oracle for On-Premise Platforms	Planned SAP Certification
Oracle Database 18c	November 2018 Release Update (18.4)	End of CY2018/Q1CY2019
Oracle Database 19c	April 2019 Release Update (19.3)	End of CY2019

# Oracle Upgrade Recommendations<sup>1</sup>

## Your Current Situation:

You are on Oracle Database 11.2.0.4, 12.1.0.2 or 12.2.0.1



## Direct Upgrade to Oracle 19c

All Oracle versions above allow a direct upgrade to Oracle 19c:

11.2.0.4    12.1.0.2    12.2.0.1    18

<sup>1</sup> Source: Oracle MOS Note 742060.1, October 2018   <sup>2</sup> i.e. you have an Unlimited License Agreement   <sup>3</sup> Oracle 19c is a *Long Term Support Release*

# Miscellaneous **Topics**



# SAP on Oracle Database 11g Extended Support

## Oracle Database 11g Extended Support

### Support Dates:

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Start	February 1, 2015
Add' fees waived until	December 31, 2018
End	December 31, 2020

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### For details see

- SAP Notes 2098258 and 2699935 **NEW!**

## 11g ES fees were waived for last 3+ years

No extra charges until 31 December 2018

- Automatic participation
- Supported releases<sup>1</sup>: 11.2.0.4<sup>2</sup>

## Starting 1 January 2019

2 years of extra-charged Extended Support

- Official request necessary
- SAP online order form now active
  - see SAP Note 2699935
- Supported releases<sup>1</sup>: 11.2.0.4<sup>2</sup>

<sup>1</sup> CAUTION: Oracle 11.2.0.3 left Oracle support end of August 2015 <sup>2</sup> August 2018 SBP is most recent and contains PSU 180717 for 11.2.0.4

Social Media

## SAP on Oracle Community

### SAP on Oracle Community Page

Find news, discussions and resources related to SAP on Oracle at

[go.sap.com/community/topic/oracle.html](https://go.sap.com/community/topic/oracle.html)<sup>1</sup>

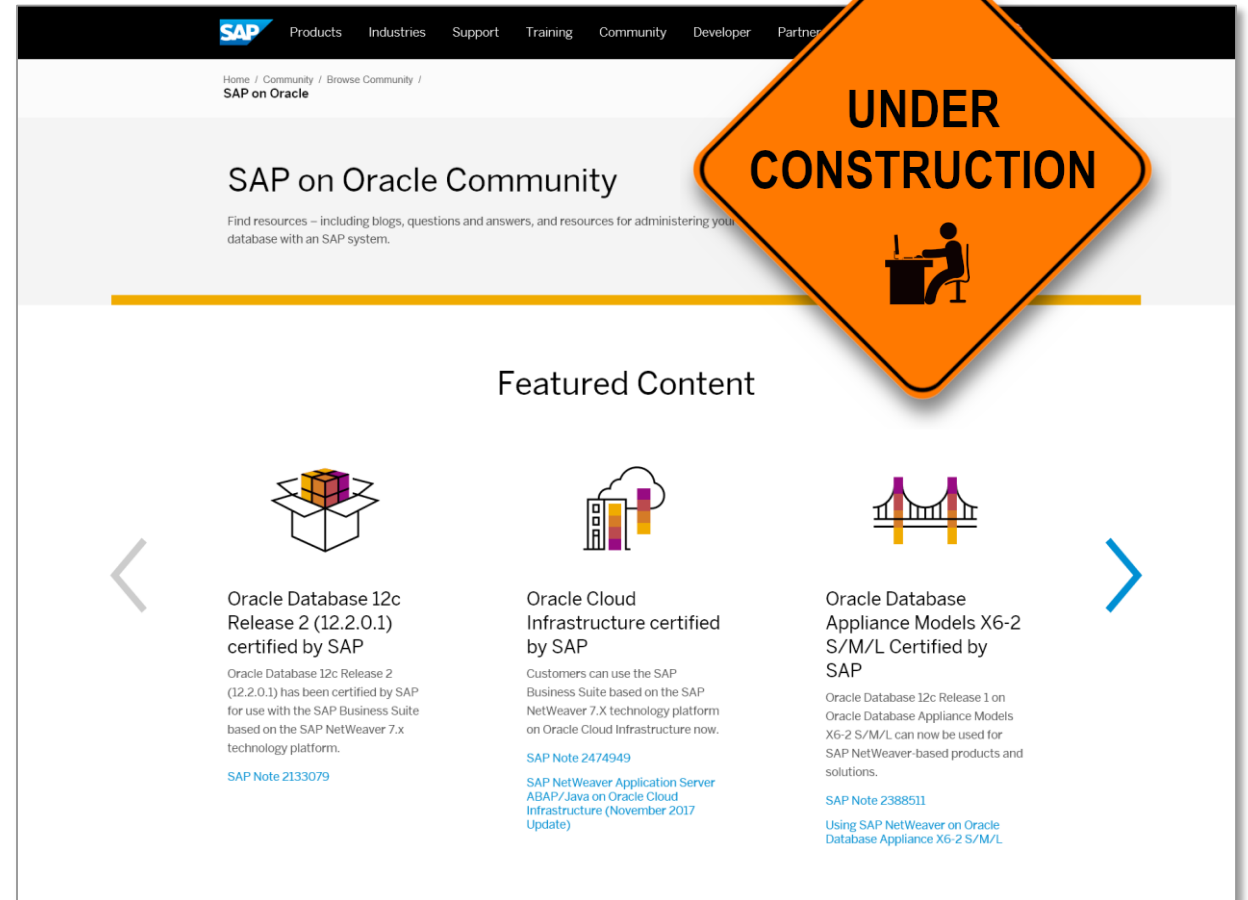
NAVIGATION FROM SAP CORPORATE HOMEPAGE

[go.sap.com](https://go.sap.com)

→ Community

→ Browse the Community

→ Search for *SAP on Oracle*



The screenshot shows the SAP on Oracle Community page. The page header includes the SAP logo and navigation links: Products, Industries, Support, Training, Community, Developer, and Partner. Below the header, the page title is "SAP on Oracle Community" with a subtitle "Find resources – including blogs, questions and answers, and resources for administering your database with an SAP system." A large orange diamond-shaped sign with the text "UNDER CONSTRUCTION" and an icon of a person sitting at a desk is overlaid on the right side of the page. Below the sign, the "Featured Content" section is visible, featuring three articles:

- Oracle Database 12c Release 2 (12.2.0.1) certified by SAP**  
Oracle Database 12c Release 2 (12.2.0.1) has been certified by SAP for use with the SAP Business Suite based on the SAP NetWeaver 7.x technology platform.  
[SAP Note 2133079](#)
- Oracle Cloud Infrastructure certified by SAP**  
Customers can use the SAP Business Suite based on the SAP NetWeaver 7.X technology platform on Oracle Cloud Infrastructure now.  
[SAP Note 2474949](#)  
SAP NetWeaver Application Server ABAP/Java on Oracle Cloud Infrastructure (November 2017 Update)
- Oracle Database Appliance Models X6-2 S/M/L Certified by SAP**  
Oracle Database 12c Release 1 on Oracle Database Appliance Models X6-2 S/M/L can now be used for SAP NetWeaver-based products and solutions.  
[SAP Note 2388511](#)  
Using SAP NetWeaver on Oracle Database Appliance X6-2 S/M/L

<sup>1</sup> Former *SAP Community Network (SCN)* was discontinued in fall 2016

Social Media

## SAP on Oracle – Twitter

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- Product certifications
- Best Practices/White Papers

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[twitter.com/SAPonOracle](https://twitter.com/SAPonOracle)

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**SAP**

TWEETS 85 FOLLOWER 469 Folgen

**SAP on Oracle**  
@SAPonOracle  
News and info for SAP customers running the Oracle database  
[scn.sap.com/community/orac...](https://scn.sap.com/community/orac...)  
Beigetreten Juni 2013

Tweets Tweets & Antworten

**SAP on Oracle** @SAPonOracle · 26. Aug.  
See our new #SAP on #Oracle development update at [tinyurl.com/scnsapora](https://tinyurl.com/scnsapora)

**SAP on Oracle** @SAPonOracle · 19. Juli  
New #SAP BR\*Tools patch now available with support for #Oracle 12c Multitenant Database, see [tinyurl.com/scnsapora](https://tinyurl.com/scnsapora)

Neu bei Twitter?  
Melde Dich jetzt an, um Deine eigene, personalisierte Timeline zu erhalten!  
Registrieren

Vielleicht gefällt Dir auch · Aktualisieren

**SAP** SAP Community @SAPCommunity

# Thank you.

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