



Cloud at Customer Academy 3.0

Exadata Cloud - Patching

Marcel Lamarca

Licenses and Systems

Alexandre Fagundes

OCI Databases & App's DBA

LAD Partner Enablement Knowledge Team

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Nuestros Valores

Integridad

Compliance

Trabajo en Equipo

Satisfacción del Cliente

Calidad

Ética

Innovación

Respeto Mutuo

Justicia

Comunicación

Como empresa líder en tecnología, aceptamos la **diversidad** en todas sus formas. Realmente creemos que la **innovación** comienza con la **inclusión**. Y esto solo se puede lograr con la cooperación de nuestros **partners**. Afirmamos nuestro **compromiso** de mantener un **ambiente respetuoso** y **libre de discriminación** y esperamos esto de nuestros **socios de negocios**.

Oracle espera que sus **partners** realicen negocios de manera **justa** y **ética**, cumplan con las leyes anticorrupción en todo el mundo, cooperen con las solicitudes de información de Oracle y eviten participar en cualquier actividad que implique incluso la apariencia de ser incorrecta.

Es vital que nuestros partners se adhieran al **Código de Ética y Conducta Comercial de Oracle**, que da los lineamientos sobre los valores que son esenciales para nuestro éxito como empresa. Estos valores son la base de todo lo que hacemos y lo que debemos vivir todos los días.



Utilice el código QR para acceder al Código de Ética y Conducta Comercial de Oracle.

Agenda

ExaC@C – Patching *Dom0*

ExaC@C – Why patch my database?

ExaC@C - Pre Patching best practices

ExaC@C - Patching Grid Home

ExaC@C - Patching Oracle Home

ExaC@C - Patching DomU (Linux Image)

Demo – Grid Home – Prechk *Dbaascli*

Demo – DomU (Linux) Prechk *Patchmgr*

Demo – Patching Oracle Home 19c

Exadata Academy 3.0 | Register Now

Oracle Exadata Cloud at Customer Academy

Para capacitar a nuestros Partners en Servicios OCI, creamos la nueva versión de la Academia Cloud at Customer.

Esta academia contará con **10 sesiones de capacitación**, a partir del **14 de julio**, que permitirán a los participantes conocer las principales características y funcionalidades de Oracle Exadata y PCA ¡También será una excelente oportunidad para aclarar todas sus dudas para obtener su certificación!

Únase a esta capacitación y descubra por qué Oracle Cloud at Customer es la forma más sencilla de mover cargas de trabajo críticas de Oracle Database de una organización a la nube.

Consulte la agenda a continuación e inscríbase. ¡Contamos con su participación!

ExaC@C Overview

14 de julio

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

PCA - Private Cloud Appliance

26 de julio

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

C@C Patching – Demo Session

28 de julio

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

C@C Backup & Restore – Demo Session

3 de agosto

1:00 p.m. - 2:30 p.m. (Mexico Time)

[Regístrate](#)

Migration and move to Cloud – Demo Session

10 de agosto

1:00 p.m. - 2:30 p.m. (Mexico Time)

Troubleshooting tools – Demo Session

24 de agosto

1:00 p.m. - 2:30 p.m. (Mexico Time)

[Regístrate](#)

Monitoring – Demo Session

31 de agosto

1:00 p.m. - 2:00 p.m. (Mexico Time)

[Regístrate](#)

Smart Scan, HCC compression & In-Memory – Demo Session

14 de septiembre

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

A&Q for Certification

21 de septiembre

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

C@C New Features - Demo Session

28 de septiembre

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

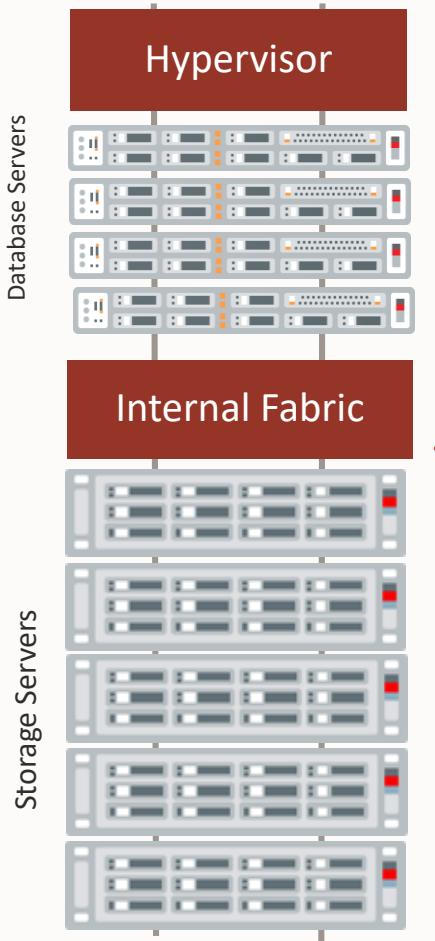
[Click Here](#)



Patching Exadata Cloud Domo



Exadata Dom0 characteristics and responsibilities



Exadata Cloud at Customer Dom0 Quarterly Patch

- Customer must provide at least ***4 maintenance windows*** per year
- Customer can choose between ***rolling*** and ***no rolling*** upgrade mode
- Patch starts on ***Database Nodes*** and can take up to ***120 min*** per server to be completed
- Partial or total unavailability is not expected during the ***Storage Cell*** upgrade

[Click here Exadata Maintenance Details](#)

Exadata Cloud at Customer Dom0 Monthly Security patch

- Executed in months when important security updates are needed and includes fixes for vulnerabilities
- CPU scaling and VM startup/shutdown are the only operations supported during monthly infrastructure maintenance.
- Oracle, recommends scheduling quarterly and monthly maintenance at the same time

[Click here Security Maintenance Details](#)

Dom0 and Monthly Security patch agendas

Exacc Infra Maintenance

The patch contains ExaCC software update for Q3 2023.

Status: ● Scheduled

Type: Quarterly

OCID: ...ozryiq [Show](#) [Copy](#)

Exadata Infrastructure: [REDACTED]

Target DB Server Version: LATEST ⓘ

Target Storage Server Version: LATEST ⓘ

Maintenance Method: Rolling

Custom action timeout: 0 ⓘ

Scheduled Start Time: Sat, Aug 26, 2023, 13:00:00 UTC

Total Estimated Maintenance Time: 7 hours ⓘ [View](#)

Exadata Infrastructure Security Maintenance

Your Exadata Infrastructure is scheduled for security maintenance at 2023-08-06 05:00.

Status: ● Scheduled

Type: Monthly Security Maintenance

OCID: ...m44gcq [Show](#) [Copy](#)

Exadata Infrastructure: [REDACTED]

Target DB Server Version: 22.1.10.0.0.230422 (230704) ⓘ

Target Storage Server Version: 22.1.11.0.0.230516 ⓘ

Maintenance Method: Online

Scheduled Start Time: Sun, Aug 6, 2023, 05:00:00 UTC ⓘ

Total Estimated Maintenance Time: 3 hours 15 minutes ⓘ



Dom0 maintenance time history through OCI Console

Exadata Infrastructure Maintenance

Maintenance

Maintenance History

Estimated Maintenance Time Details

Total Estimated Maintenance Time: 7 hours ⓘ

Database Servers Estimated Maintenance Time: 3 hours

Order	Display name	Status	Estimated Time	Custom action timeout ⓘ	Number of VMs impacted ⓘ	Number of AVMS impacted ⓘ
1	dbServer-1	Scheduled	1 hour 30 minutes	0 minutes	3 <a>Show Details	1 <a>Show Details
2	dbServer-2	Scheduled	1 hour 30 minutes	0 minutes	3 <a>Show Details	1 <a>Show Details

Showing 2 Items

Storage Servers Estimated Maintenance Time: 3 hours ⓘ

Network Switches Estimated Maintenance Time: 1 hour

Maintenance History

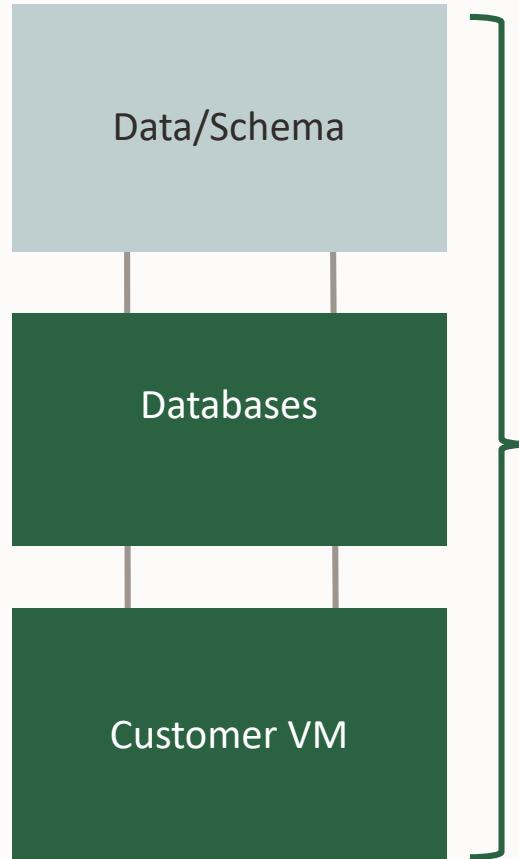
Exadata Infrastructure:

Title	State	Target Database Server Version ⓘ	Target Storage Server Version ⓘ	Start Time	End Time	Type	Scheduling
Exadata Infrastructure Security Maintenance	● Succeeded	230607	22.1.11.0.0.230516	Tue, Jul 4, 2023, 05:00:14 UTC	Tue, Jul 4, 2023, 07:32:25 UTC	Monthly	Planned
Exacc Infra Maintenance	● Succeeded	22.1.10.0.0.230422	22.1.10.0.0.230422	Sat, May 27, 2023, 13:00:24 UTC	Sat, May 27, 2023, 16:12:26 UTC	Quarterly	Planned
Exadata Infrastructure Security Maintenance	● Succeeded	230508	22.1.10.0.0.230422	Thu, May 25, 2023, 10:16:39 UTC	Thu, May 25, 2023, 10:29:37 UTC	Monthly	Planned

Patching Exadata Cloud DomU



DomU patch characteristics and responsibilities



Customer is responsible for any DomU patch

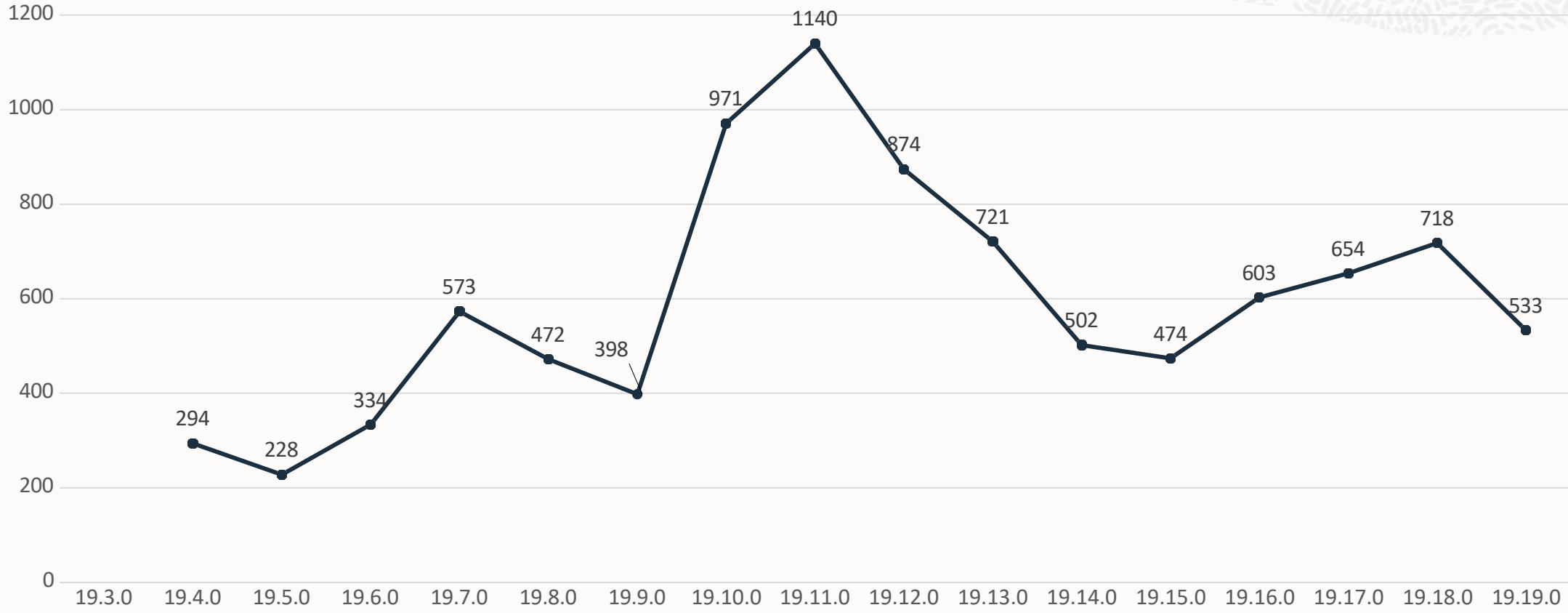
- Oracle ***dbaascli*** (tooling) upgrade and can be configured automatically
- Oracle Linux ***DomU*** Image using ***patchmgr*** or ***OCI Console***
- ***Oracle Home*** can be updated through ***Dbaascli*** or ***OCI Console***
- ***Grid Home*** can be updated through ***OCI Console*** or ***Dbaascli***
- ***One-off Patching*** may be required in case any specific issue is not fixed on bundle patch's



Why do I have to patch my Database ?



Oracle 19c Release update contents



[Database 19 Release Updates and Revisions Bugs Fixed Lists \(Doc ID 2523220.1\)](#)



• Exadata Critical Issues

MOS DOC 1270094.1

#	Applies to	Issue	Fix or Workaround	Date
IB9	Sun Datacenter InfiniBand Switch 36 software 2.2.15-1 and lower	Bug 30303098 - Excessive network traffic on the management network, such as that caused by a broadcast storm, can lead to simultaneous reset of all InfiniBand switches, causing an InfiniBand network outage and/or database node evictions.	Fixed in 2.2.16. See Document 2773989.1 for details. Review issue DB49 before updating InfiniBand Switch software.	2021-May-04
IB8	Sun Datacenter InfiniBand Switch 36 software 2.2.6, 2.2.7, and 2.2.8 with network partitioning configured.	Bug 27611791 - When InfiniBand network partitioning is in use and the Primary subnet manager (SM) receives a constant flood of P_Key violation traps, the current partition policy may be reset to the default partition policy, which causes connection failure amongst servers communicating in the non-default partition(s). This can lead to dismounted ASM disk groups and node evictions.	Fixed in 2.2.9. See Document 2413649.1 for details. Review issue EX38 below for additional detail.	2018-Jun-29
IB7	Sun Datacenter InfiniBand Switch 36 software 2.1.5 and earlier.	Bug 17482244 - If the Primary subnet manager (SM) on an InfiniBand switch becomes overloaded one of the standby SMs will become a second Primary SM. After the original Primary SM becomes active again and the switches negotiate to return back to having a single Primary SM, some database servers and/or storage servers may no longer be able to communicate on the InfiniBand network, which can lead to node eviction or cluster outage.	Fixed in 2.1.6. See Document 2400204.1 for details.	2018-Jun-14
IB6	Sun Datacenter InfiniBand Switch 36 software 2.1.x through 2.2.7.	Bug 26678971 - The real time clock (RTC) on an InfiniBand switch may become corrupt, which may cause the switch to become unbootable when attempting to upgrade.	Fixed in 2.2.8. See Document 2309926.1 for details.	2017-Sep-27
IB5	Sun Datacenter InfiniBand Switch 36 software 2.1.8 and earlier	Bug 23528420 - InfiniBand switches may experience high CPU utilization after receiving a malformed POST request via HTTP or HTTPS, which may result in subnet manager unable to get CPU to respond to network management duties, which can lead to database server or storage server eviction. Such requests are often initiated by a security scan tool.	Fixed in 2.2.2. See Document 2169026.1 for details.	2016-Aug-11
IB4	Sun Datacenter InfiniBand Switch 36 software 2.1.3-4 (supplied with Exadata 11.2.3.3.0) when connected to Exalogic Virtual environment over the InfiniBand network.	Bug 17936962 - Invalid pkey values in partition definitions in Exalogic Virtual environments prevents add or delete members of a partition. Note: From Exadata perspective, this issue <u>only</u> applies when an Exalogic Virtual environment is connected to Exadata via the InfiniBand network.	Apply April PSU to Exalogic prior to Exadata InfiniBand switch upgrade to 2.1.3-4. Review Document 1301247.1 for additional details about Exalogic April PSU. Prior to Exalogic April PSU availability, the recommendation was to apply patch 18034691. Details are available in Document 1630396.1. Note that patch 18034691 is not compatible with patch 18175326, which may be applied to address guest vServers connectivity issues (see Document 1615444.1). Both issues are fixed in Exalogic April PSU.[This section is not visible to customers.]	2013-Dec-16

Before upgrading, apply the most important patches

- In addition, use Patches to consider for 19c : MOS Note: [2781612.2](#)

 **Oracle Database Patches to Consider for 19c (Doc ID 2781612.2)**

Visibility: EXTERNAL (4)

Getting Started Performance GoldenGate Oracle Text Platform Specific HA DNFS Data Pump

Search This Document

When applying Database patches, Oracle recommends that you take a 3-tiered step-by-step approach.

LEVEL 1: Apply latest quarterly patches:

- Apply latest quarterly updates using [Master Note for Database Proactive Patch Program \(Doc ID 888.1\)](#)

LEVEL 2: Apply Critical/Recommended patches:

- For Exadata environments: [Exadata Critical Issues \(Doc ID 1270094.1\)](#)
- For Database environments:
 - Customers on Linux x86-64 - Apply the latest [Monthly Recommended Patches - MRP \(Doc ID 2898740.1\)](#) for the specific RU
 - For customers on other platforms, apply critical patches using [Oracle Database 19c Important Recommended One-off Patches \(Doc ID 555.1\)](#)

LEVEL 3: Apply additional patches based on features or focus areas:

- Use the tabs in this document for quick access to additional feature based patches

Basic Facts | What's Installed



What is installed in my Oracle Home?

OPatch

```
$ opatch lsinventory
```

```
$ opatch lspatches
```

DBMS_QOPATCH

```
SQL> select xmltransform(dbms_qopatch.get_opatch_lsinventory, dbms_qopatch.get_opatch_xslt) from dual;
```

[Oracle Database 12.1 : FAQ on Queryable Patch Inventory \(Doc ID 1530108.1\)](#)

What is installed in my database?

```
SQL> select * from dba_registry_sqlpatch;
```

```
SQL> select * from cdb_registry_sqlpatch;
```

Exadata Cloud Management Tools



Exadata Cloud Automation on OCI Console

Oracle Cloud Web base UI, REST APIs, SDK, CLI, Terraform

- Scale OCPUs
- Create Database Homes and Databases
- Schedule Infrastructure Maintenance
- Update Operating System, Grid Infrastructure, and Databases
- Backup and recovery
- Enable Data Guard

The image shows two overlapping dialog boxes from the Oracle Cloud Console:

- Create Database**:
 - Database name: X8MDB1
 - Database version: 19c
 - PDB name (Optional):
 - Database Home:
 - Select an existing Database Home (radio button)
 - Create a new Database Home (radio button, selected)
 - This DB system has no Database Homes for your selected database version. A new Database Home will be created.
 - Database Home display name: X8MDBHome1
 - Create administrator credentials:
 - Create Database
 - Cancel
- Scale VM Cluster**:
 - Configure the VM cluster
 - Specify OCPU count per virtual machine: 10
 - Requested OCPU count for the Exadata VM cluster: 40
 - Current allocation: 10. Minimum allocation: 0. Available OCPUs (including the current allocation): 50.
 - Current Exadata storage: 150.528 TB
 - Update
 - Cancel

The image shows three stacked dialog boxes from the Oracle Cloud Console:

- Create Backup**:
 - Name: (input field)
 - If you previously used RMAN or dbcli to configure backups and then you switch to using the Console or the API for backups, a new backup configuration is created and associated with your database. This means that you can no longer rely on your previously configured unmanaged backups to work.
 - Create Backup
 - Cancel
- Enable Data Guard**:
 - Data Guard association details
 - Protection mode: Maximum Performance
 - Transport type: Read-Only
 - Async
- Select Peer VM Cluster**:
 - Peer region: Read-Only
 - US East (Ashburn)



Exadata Cloud Command Line Interface (*dbaascli*)

How to upgrade DBAAS Cloud Tooling using dbaascli (Doc ID 2350471.1)



Database Commands

- *dbaascli* database create
- *dbaascli* pdb create
- *dbaascli* pdb relocate



Backup Commands

- *dbaascli* database backup
- *dbaascli* database recover
- *dbaascli* create-dbstorage



Database Home Patch

- *dbaascli* database upgrade
- *dbaascli* db home patch
- *dbaascli* grid patch
- *dbaascli* update-dbhomedir



[Click Here](#)

Pre Paching Best Practices





- Upgrade your **Dbaascli** and **Exachk** to the most recent version
- Open a proactive SR **Serv 3** on MOS at least 5 days before the maintenance window
- Generate **Exachk** report and attach to parent SR
- Backup your **Grid Home**, **Oracle Home**, and **Inventory files**
- Backup your entire Database including **Redo Logs**, **Control Files**, **Archive Log Files** and **Data Files**
- If you have a Oracle **Data Guard**, Oracle strongly recommend apply patch on **Data Guard** first
- 2 hours before the maintenance starts, change SR severity level to **Serv 1** and inform support that patch maintenance is about to begin

Oracle Home Monthly Patch



Time Line | Release update

2021				2022				2023				2024			
	January	April	July	October	January	April	July	October	January	April	July	October	January	April	July
19c	19.10.0	19.11.0	19.12.0	19.13.0	19.14.0	19.15.0	19.16.0	19.17.0	19.18.0	19.19.0	19.20.0	19.21.0	19.22.0	19.23.0	19.24.0
21c		21.3.0	21.4.0	21.5.0	21.6.0	21.7.0	21.8.0	21.9.0	21.10.0	21.11.0	21.12.0	21.13.0	21.14.0	21.15.0	

Monthly Recommended Patches | Timeline

2022												2023				
		October	November	December	January	February	March	April	May	June	July	August	September	October	November	
19.17.0	19.17.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6									
19.18.0				19.18.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6						
19.19.0					19.19.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6					
19.20.0						19.20.0	MRP1	MRP2	MRP3	MRP4						
19.21.0							19.21.0	MRP1								



Monthly Recommended Patches | Step-by-step

2022		2023											
October	November	December	January	February	March	April	May	June	July	August	September	October	November
19.17.0	19.17.0	MRP1											

A red arrow points from the 'MRP1' label in the timeline to the third row of the table below.

Bug	Fixed in RU	Fixed in MRP	Description	Patches	NON ROLLING	Added
33896423		DBMRP 19.17.0.0.221115	Flush Out Stale Antilocks and Convert kclcls_2 and kclantilock_17 to Soft Assert	[list-patches]		01-SEP-2022
34333986		DBMRP 19.17.0.0.221115	ORA-600 [KTUSCV1:CV Buf Too Big]/ [Kdbblkcheckerror] Block Corruption With Check Code 6127 After Migrating From Solaris to Linux	[list-patches]		28-JUL-2022
30691454		DBMRP 19.17.0.0.221115	DBHOME patching completely hung with kpdbhashtable_find multiple instance hang	[list-patches]		22-JUL-2022

Monthly Recommended Patches | Step-by-step

2022

| 2023

October November December January February March April May June July August September October November

19.17.0

19.17.0

MRP1

MRP2



Bug	Fixed in RU	Fixed in MRP	Description	Patches	NON ROLLING	Added
34649727			Linux: ORA-800 / Set Priority / DB Performance Merge Patch for 19.17 - 34286265 34318125	[list-patches]		18-OCT-2022
33896423		DBMRP 19.17.0.0.221115	Flush Out Stale Antilocks and Convert kccls_2 and kclantilock_17 to Soft Assert	[list-patches]		01-SEP-2022
34333986		DBMRP 19.17.0.0.221115	ORA-600 [KTUSCV1:CV Buf Too Big]/ [Kdbblkcheckerror] Block Corruption With Check Code 6127 After Migrating From Solaris to Linux	[list-patches]		28-JUL-2022
30691454		DBMRP 19.17.0.0.221115	DBHOME patching completely hung with kdphashable_find multiple instance hang	[list-patches]		22-JUL-2022

Monthly Recommended Patches | Step-by-step

2022					2023								
October	November	December	January	February	March	April	May	June	July	August	September	October	November
19.17.0	19.17.0	MRP1	MRP2	MRP3									
19.18.0			19.18.0										



Monthly Recommended Patches | Step-by-step

2022						2023							
October	November	December	January	February	March	April	May	June	July	August	September	October	November
19.17.0	19.17.0	MRP1	MRP2	MRP3	MRP4								
19.18.0			19.18.0	MRP1									



Monthly Recommended Patches | Step-by-step

2022		2023											
October	November	December	January	February	March	April	May	June	July	August	September	October	November
19.17.0	19.17.0	MRP1	MRP2	MRP3	MRP4	MRP5							
19.18.0			19.18.0	MRP1	MRP2								



Monthly Recommended Patches | Step-by-step

2022		2023													
		October	November	December	January	February	March	April	May	June	July	August	September	October	November
19.17.0	19.17.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6								
19.18.0				19.18.0	MRP1	MRP2	MRP3								
19.19.0						19.19.0									



Mothly Recommended Patches | Step-by-step

2022		2023													
		October	November	December	January	February	March	April	May	June	July	August	September	October	November
19.17.0	19.17.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6								
19.18.0			19.18.0	MRP1	MRP2	MRP3	MRP4								
19.19.0					19.19.0	MRP1									



Monthly Recommended Patches | Step-by-step

2022		2023													
		October	November	December	January	February	March	April	May	June	July	August	September	October	November
19.17.0	19.17.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6								
19.18.0			19.18.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6						
19.19.0				19.19.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6					
19.20.0					19.20.0	MRP1	MRP2	MRP3	MRP4	MRP5	MRP6				
19.21.0						19.21.0	MRP1								



Exadata Cloud Dbaascli tooling



★ How to upgrade DBAAS Cloud Tooling using dbaascli (Doc ID 2350471.1)

In this Document

[Goal](#)

[Solution](#)

[Steps to Upgrade the Cloud Tooling using dbaascli](#)

[References](#)

APPLIES TO:

Oracle Database Cloud Service - Version N/A to N/A [Release 1.0]

Information in this document applies to any platform.

GOAL

This document covers the steps to upgrade dbaas cloud tooling using dbaascli

SOLUTION

Cloud tooling include the fixes for existing issues and new features so it is highly recommended to upgrade the cloud tooling once new version or release is available. Steps given below help to upgrade it to the higher version.

Note: When updating the cloud tooling on database deployments hosting a Data Guard configuration, you must perform the following steps on both nodes; that is, on the one hosting the primary database and on the one hosting the standby database.

Steps to Upgrade the Cloud Tooling using dbaascli

1. Connect as the opc user to the compute node. Check [Connecting to a Compute Node Through Secure Shell \(SSH\)](#)
2. Start a root user command shell

```
sudo -s
```

```
#
```

Oracle Home in and Out-of-Place



Pathing Concepts | In-Place Patching

Oracle Home, 19.18.0



Pathing Concepts | Out-Of-Place Patching



Oracle Home, 19.18.0



```
SQL> SHUTDOWN IMMEDIATE
```



```
# DATAPATCH
```

New Oracle Home, 19.19.0



Tim Hall  +∞ 
@oraclebase

...

When patching your production Oracle GI/DB installations, which method do you use?

In-Place = Current ORACLE_HOME

Out-Of-Place = New ORACLE_HOME

If you don't look after have production kit, then don't answer.

In-Place

55.4%

Out-Of-Place

44.6%

Exadata Patching Oracle Home



★ How to Apply Database Quarterly Patch on Exadata Cloud Service and Exadata Cloud at Customer Gen 2 (Doc ID 2701789.1)

In this Document

[Goal](#)

[Solution](#)

[Prerequisites](#)

[Option 1 - Patching Individual Databases - Out of Place Patching](#)

[Option 2 - Patching a Database Home - Image Based Patching](#)

[Troubleshooting](#)

[References](#)

APPLIES TO:

Oracle Database Cloud Exadata Service - Version N/A to N/A [Release 1.0]

Information in this document applies to any platform.

GOAL

Patch an Exadata Cloud Services or Exadata Cloud at Customer Gen 2 Database

SOLUTION

This document should be used to apply a higher quarterly Release Update to the databases and database homes of either an Exadata Cloud@Customer Gen 2 (ExaC@C) service or Exadata Cloud Service (ExaCS) service.

For Data Guard configurations, the primary and standby database must be patched separately and the standby database patching should be completed before patching the primary.

See Document [1265700.1](#) Oracle Patch Assurance - Data Guard Standby-First Patch Apply for full details on standby first patching.

It is supported to run with the standby database at a higher patch level for up to a month.

Patchin Oracle Home using OCI Console

Database Home: dbhome_19c_demo

Oracle Provided Database Software Images

Custom Database Software Images

Patch Description	State	Version	Release Date	Precheck	⋮
Database Release Update : 19.19.0.0.230427 (Apr 2023)	● Available	19.19.0.0.0	Sun, May 7, 2023, 01:43:59 UTC		

Displaying 1 Database Home patch

Copy OCID

Confirm precheck

Are you sure you want to perform a precheck operation on the Database Home?

Run Precheck

[Cancel](#)

Patching Oracle Home Using OCI Console

The image displays two screenshots of the OCI Console interface, illustrating the status of a patch precheck operation.

Top Screenshot: Shows the "Precheck DbHome Patch" operation in progress. The progress bar is at 15% complete. The status is "In progress". The "Work request information" section includes the operation name, OCID, and timestamps for acceptance and start. A large orange "WR" icon on the left indicates the status is "IN PROGRESS".

Information	Value
Operation	Precheck DbHome Patch
Accepted	Mon, Jul 10, 2023, 20:06:12 UTC
Started	Mon, Jul 10, 2023, 20:06:34 UTC
OCID	...qkztaa Show Copy
Status	In progress
Progress	15% complete

Bottom Screenshot: Shows the same "Precheck DbHome Patch" operation now succeeded. The progress bar is at 100% complete. The status is "Succeeded". The "Work request information" section includes the operation name, OCID, and timestamps for acceptance, start, and finish. A large green "WR" icon on the left indicates the status is "SUCCEEDED".

Information	Value
Operation	Precheck DbHome Patch
Accepted	Mon, Jul 10, 2023, 20:06:12 UTC
Started	Mon, Jul 10, 2023, 20:06:34 UTC
Finished	Mon, Jul 10, 2023, 20:13:12 UTC
OCID	...qkztaa Show Copy
Status	Succeeded
Progress	100% complete

Patching Oracle Home Using OCI Console

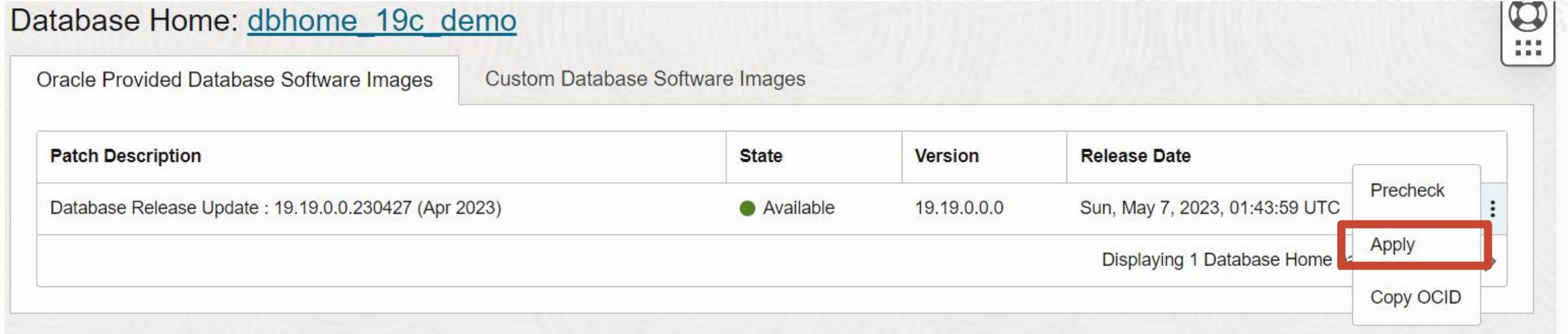
Database Home: dbhome_19c_demo

Oracle Provided Database Software Images Custom Database Software Images

Patch Description	State	Version	Release Date
Database Release Update : 19.19.0.0.230427 (Apr 2023)	● Available	19.19.0.0.0	Sun, May 7, 2023, 01:43:59 UTC

Displaying 1 Database Home

Precheck ... Apply Copy OCID



Apply Database Home Patch

This operation patches the Database Home on the nodes of the VM cluster, one node at a time.

The instances for following databases may be restarted on the nodes as they get patched:
Demo19c

Are you sure you want to patch this Database Home?



Last successful precheck was run at Sun, Jul 23, 2023, 16:31:49 UTC.

Apply Patch

[Cancel](#)

Exadata Patching Grid Home



Patching Oracle Grid Infrastructure and Oracle Databases Using dbaascli

Learn to use the `dbaascli` utility to perform patching operations for Oracle Grid Infrastructure and Oracle Database on an Exadata Cloud Infrastructure system.

- [Patching Databases using dbaascli](#)

Using `dbaascli`, you can choose to patch a database by patching Oracle home, or by moving the database to an Oracle home with the desired patch level.

- [Patching Oracle Grid Infrastructure](#)

To apply a patch to Oracle Grid Infrastructure, use the `grid patch` command.

- [Listing Available Software Images and Versions for Database and Grid Infrastructure](#)

To produce a list of available supported versions for patching, use the `dbaascli cswlib showImages` command.

- [Performing a Precheck Before Patching Databases and Grid Infrastructure](#)

You can perform a prerequisites-checking operation (also called a "precheck") for the commands in this topic using the applicable precheck flag.

Pathing Grid Home using Patching DomU

VM Cluster: [REDACTED]						
Update description	State	Component	Type	Version	Last Successful Precheck	Release Date
Grid Infrastructure Release Update : 19.19.0.0.230427 (Apr 2023)	Available	Grid Infrastructure	Patch	19.19.0.0.0	-	<div><p>Precheck</p><p>Apply Grid Infrastructure Patch</p><p>Copy OCID</p></div>

Confirm precheck

Are you sure you want to perform a precheck operation on VM cluster?

[Run Precheck](#)

[Cancel](#)



Oracle Home Prechk via OCIU Console

The image displays two screenshots of the Oracle Cloud Infrastructure User (OCIU) console, illustrating the status of a work request for a VM Cluster GI Patch.

Screenshot 1 (Top): Shows a work request in progress. The status bar indicates "In progress" with a progress bar at 0% complete. The main text area says "Precheck VM Cluster GI Patch".

Screenshot 2 (Bottom): Shows a work request that has succeeded. The status bar indicates "Succeeded" with a progress bar at 100% complete. The main text area says "Precheck VM Cluster GI Patch". Below this, detailed information is provided:

- Operation:** Precheck VM Cluster GI Patch
- Accepted:** Sun, Jul 23, 2023, 17:03:58 UTC
- Started:** Sun, Jul 23, 2023, 17:04:15 UTC
- Finished:** Sun, Jul 23, 2023, 17:08:40 UTC
- OCID:** ...2ldqya [Show](#) [Copy](#)
- Compartment:** [REDACTED]



Pathing Grid Home using OCI Console

VM Cluster: [REDACTED]

Update description	State	Component	Type	Version	Last Successful Precheck	Release Date	
Grid Infrastructure Release Update : 19.19.0.0.230427 (Apr 2023)	● Available	Grid Infrastructure	Patch	19.19.0.0.0	Sun, Jul 23, 2023, 17:15:39	Precheck	⋮
Grid Infrastructure Release Update : 19.18.0.0.230117 (Jan 2023)	● Available	Grid Infrastructure	Patch	19.18.0.0.0	-	Apply Grid Infrastructure Patch	⋮

Apply VM Cluster Patch

During patching, lifecycle operations on the VM cluster and its resources are temporarily unavailable.

Are you sure you want to patch VM cluster [REDACTED] running version 19.10.0.0.0 with version 19.19.0.0.0?



Last successful precheck was run at Sun, Jul 23, 2023, 17:10:49 UTC.

[Apply Patch](#)

[Cancel](#)

Patching Linux Image



Updating Exadata Database Server Software using the patchmgr

Doc ID 1553103.1

The screenshot shows the Oracle Patch Search interface. At the top, there is a navigation bar with tabs: Knowledge, RCA, Customer Exceptions, CMS, Service Requests, Patches & Updates, Certifications, Systems, Collector, Settings, and XNS. Below the navigation bar, a search bar contains the Doc ID 1553103.1. The main content area is titled "Patch Simple Search Results" and shows a list of patches. One patch is selected: "Patch 21634633: DBSERVER.PATCH.ZIP ORCHESTRATOR PLUS DBNU - ARU PLACEHOLDER". The patch details are as follows:

Patch Name	Description
21634633	DBSERVER.PATCH.ZIP ORCHESTRATOR PLUS DBNU - ARU PLACEHOLDER

Details for Patch 21634633:

- Last Updated: 16-Jun-2023 07:30 (1+ month ago)
- Product: Oracle Exadata Storage Server Software (More...)
- Release: Oracle Exadata Storage Server 23.1.3.0.0
- Platform: Linux x86-64
- Size: 536.4 MB
- Download Access: Software
- Classification: General
- Patch Tag:

Bugs Resolved by This Patch:

List of bugs fixed is not available. Consult the Readme.

View Related Knowledge to this Patch

On the right side of the patch details, there is a summary box with the following information:

Release: Oracle Exadata Storage Server 23.1.3.0.0
Platform: Linux x86-64
Language: American English

Buttons in the summary box include: Read Me, Download, Add to Plan, Analyze with OPatch..., All-time Downloads 366, View Trends, and Discuss this patch in the community.

Step – 1 Download the most recent *patchmgr* version



DETAILS

Current Software Versions for Exadata Cloud Deployments

The versions in the table below represent the latest certified and available VM software for updating Exadata and Grid Infrastructure/Database software on systems already provisioned. Customers may update systems already provisioned to the latest certified version as desired. Certified versions for new provisioning revise less frequently, hence **systems newly provisioned may deploy with an earlier certified release** than what is shown in the table.

Note: Date code fields in version numbers (e.g. 180717) are in YYMMDD format.

Cloud Platform	Latest Certified Exadata Version	Latest Certified GI/DB Version
Exadata Database Service on Dedicated Infrastructure	22.1.11.0.0.230516	19.19.0.0.230418 18.22.0.0.230418 12.2.0.1.230418 12.1.0.2.230418 11.2.0.4.230418
Exadata Database Service on Cloud@Customer ¹	22.1.11.0.0.230516	19.19.0.0.230418 18.22.0.0.230418 12.2.0.1.230418 12.1.0.2.230418 11.2.0.4.230418
Gen 1 Exadata Cloud at Customer ¹ (Oracle Exadata Database Cloud Machine)	22.1.11.0.0.230516	19.19.0.0.230418 ² 18.22.0.0.230418 12.2.0.1.230418 12.1.0.2.230418 11.2.0.4.230418

Step 2 – Download the Image /iso version you chose for the upgrade



★ How to update the Exadata Image (OS) in Exadata Cloud at Customer (Doc ID 2391164.1)

In this Document

[Goal](#)

[Solution](#)

[Gather Requirements](#)

[Decide and Configure the Driving System](#)

[Prechecking the Environments](#)

[Backing Up the OS](#)

[Patching the OS](#)

[Rolling back the Update](#)

[References](#)

APPLIES TO:

Oracle Exadata Storage Server Software - Version 12.1.2.3.4 and later

Oracle Database Exadata Cloud Machine - Version N/A and later

Information in this document applies to any platform.

GOAL

The goal of this document is to guide a user of the Exadata Cloud at Customer in the patching of the Exadata Image (OS)

SOLUTION

Exadata Cloud:

Updating the Database Compute Nodes

Introduction

Updating the Exadata Database Compute nodes is a process that entails patching the entire OS rather than just updating single packages. Updating the OS does not use a traditional "yum update" command but uses a cli tool called patchmgr. Through patchmgr, you can update the Exadata Database Compute nodes with an ISO image staged locally on the database compute node or on a separate infrastructure instance.

Update Steps

The following steps will go through updating the Exadata Database Compute nodes from 12.x.x.x to 18.1.4.

Step 3 - Follow the steps described on this MOS note



Patching DomU Linux Image via OCI Console

The image displays two screenshots of the Oracle Cloud Infrastructure (OCI) console interface, illustrating the process of patching a VM cluster.

Screenshot 1: VM Cluster Details Page

This page shows the general information and resource allocation for a VM cluster. A large green box labeled "VM" with the word "AVAILABLE" is visible. The "Network" section is highlighted with a red oval, showing the following details:

- Version:**
 - Exadata Image Version: 20.1.2.0.0.200930
 - Grid Infrastructure Version: 19.9.0.0.0
 - Updates Available: 5 [View Updates](#)

Screenshot 2: VM Cluster & Database Patches Page

This page lists the available updates for the VM cluster. The "Virtual Machine OS Update" row is highlighted with an orange border. The "Precheck" button in the context menu is also highlighted with an orange border.

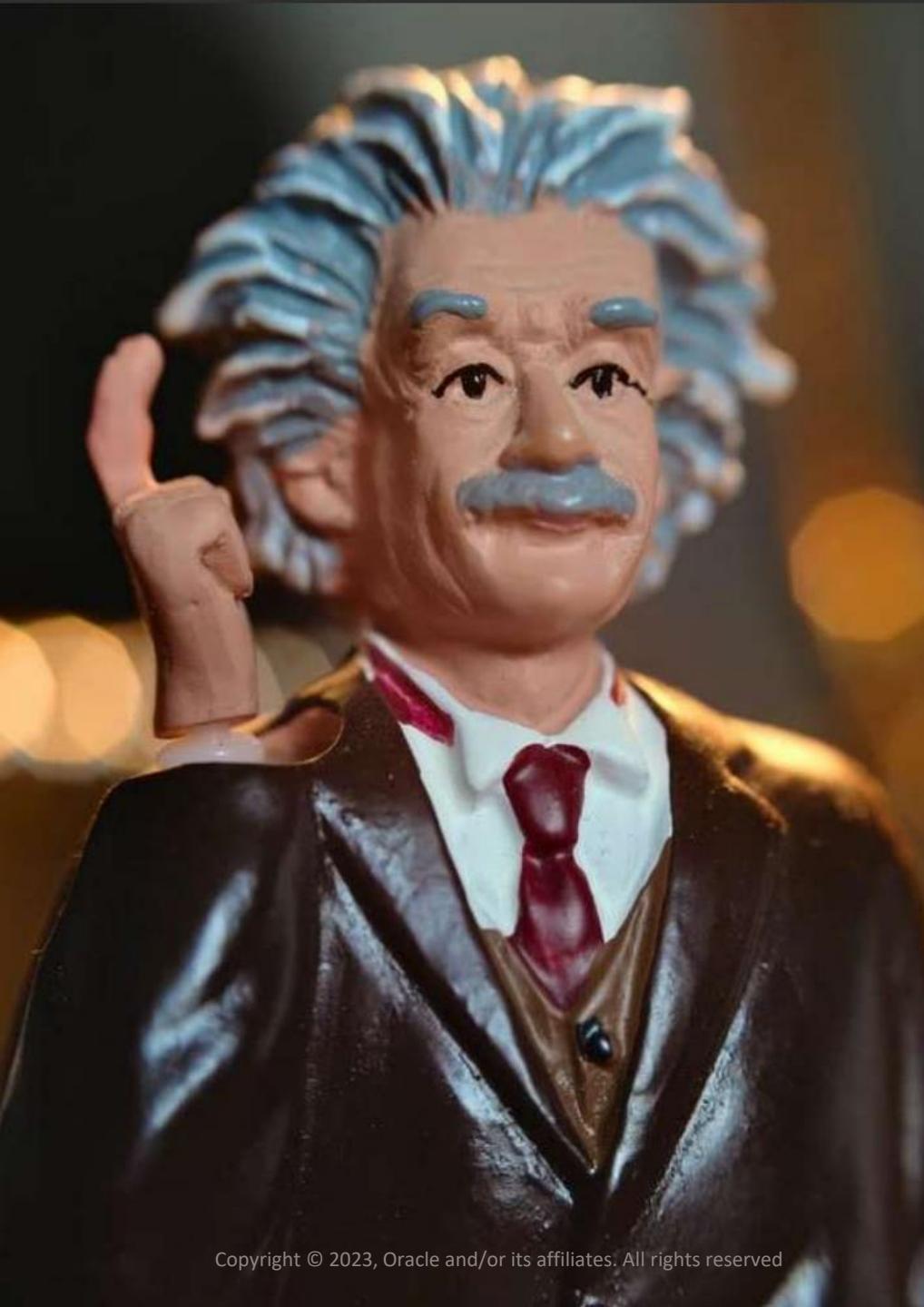
Update description	State	Component	Type	Version	Last Successful Precheck	Release Date
Virtual Machine OS Update to 21.2.0.0.0.210524	Available	Exadata Image	Update	21.2.0.0.0.210524	-	Precheck

Annotations:

- A red arrow points from the "Updates Available" section in the Network tab of the VM Cluster Details page to the "Virtual Machine OS Update" row in the VM Cluster & Database Patches table.
- A red oval highlights the "Updates Available" section in the Network tab of the VM Cluster Details page.
- An orange border highlights the "Virtual Machine OS Update" row in the VM Cluster & Database Patches table.
- An orange border highlights the "Precheck" button in the context menu of the VM Cluster & Database Patches table.

Demo Time





Demo 1 – Pre Check Grid Upgrade

- ***Grid Home*** Version 19.10.0.0
- Check ***Grid Home*** staged patch using ***Dbasscli***
- Prechk Grid Home to 19.18.0.0 using ***Dbaascli***



Demo 2 – 19c Oracle Home Patching

- Find Prechk 19c Oracle Home history
- Apply Bundle 19c Oracle Home via ***OCI Console***

Demo 3 – Pre check (Exadata Linux Image)

- Download and unzip the patch manager
- Check Linux Image current version
- Prechk image from node one to node two

DomU (Oracle Linux Exadata Image) upgrade next steps



Step 1. # ./patchmgr -dbnodes /root/patch/dbs_group **precheck** -iso_repo
/root/patch/p35129585_221000_Linux-x86-64.zip -target_version **22.1.10.0.0.230422** -nomodify_at_prereq

Step 2. #./patchmgr -dbnodes /root/patch/dbs_group -**backup** -iso_repo
/root/patch/p35129585_221000_Linux-x86-64.zip -target_version **22.1.10.0.0.230422** -
allow_active_network_mounts

Step 3. #/patchmgr -dbnodes /root/patch/dbs_group -**upgrade** -iso_repo
/root/patch/p35129585_221000_Linux-x86-64.zip -target_version **22.1.10.0.0.230422** -
allow_active_network_mounts -nobackup [-rolling]

You can only start a rollback process under supervision of Oracle Support

Step 4.#/patchmgr -dbnodes /root/patch/dbs_group -**rollback** -target_version **21.2.13.0.0.220602**

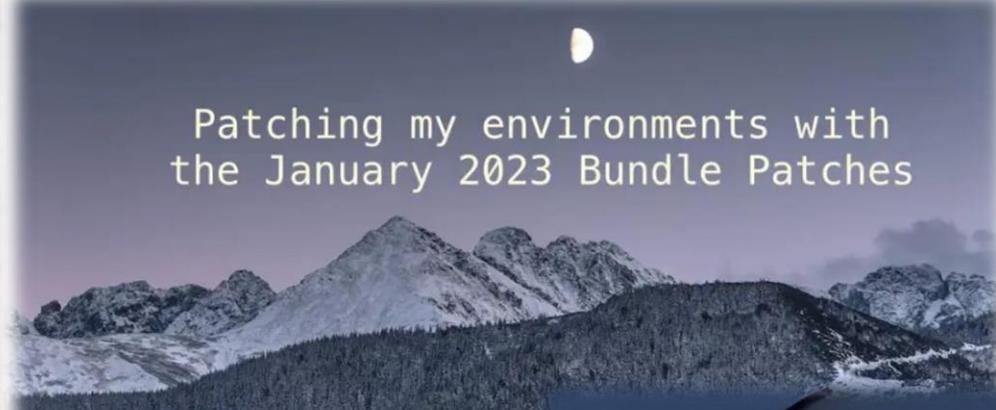
Resources





Upgrade your Database - NOW! | [Twitter](#) [LinkedIn](#) [X](#) Mike Dietrich's Blog About Oracle Database Upgrades... Mostly [Q](#)

Blog Slides Hands-On Lab ▾ Events Videos Scripts Links Oracle Documentation Privacy ▾ About



Patching my environments with the January 2023 Bundle Patches

Photo by [karokrasinska](#)



Rolling back or removing all patch SQL changes

[Click Here](#)

The background of the slide features a scenic view of mountains and forests. In the upper left area, there is a circular profile picture of a man with short brown hair, wearing a green sweater over a blue collared shirt. The main title "Databases Are Fun" is displayed in large, bold, white font across the center of the slide.

Databases Are Fun

dohdatabase.com

Slides

[Main slide deck](#)



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Email Address

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SCAN ME

The screenshot shows the homepage of the website. At the top, there is a navigation bar with links for Home, About, OCM Preparation, Developed Tools, Upgrade Team, Database changelog, and a language selector for English. Below the navigation bar is a large blue banner with the word "Webinars" in white. To the right of the banner is a small "ABOUT" section featuring a cartoon illustration of a person with blonde hair. The main content area contains a post titled "Generate APEX application checksum in PL/SQL". The post includes a snippet of code and a note that it is also available in Portuguese. Below the post, there is a table of contents for a web seminar.

DBA - Rodrigo Jorge - Oracle Tips and Guides
Blog about Databases, Security and High Availability

Home | About | OCM Preparation | Developed Tools | Upgrade Team | Database changelog | English

Webinars

Generate APEX application checksum in PL/SQL This post is also available in: Português

In Oracle APEX, generating the application checksum is useful to compare if the application you exact copy of the application running somewhere else. To create this checksum, you ...

Web Seminar	Duration	Released	Slides
Episode 1 Release and Patching Strategy	105 minutes	Feb 4, 2021	

[Click Here](#)

Exadata Cloud Oracle on Architecture Center



The screenshot shows the Oracle Architecture Center homepage with a search bar containing the query "exadata cloud at customer". The results page displays several cards:

- Architecture Center content:** Reference Architectures, Solution Playbooks, Built & Deployed. [Learn more](#)
- Tharseo IT: Migrate Ellucian Banner ERP to Oracle Cloud using FastConnect and Rackware** (Automation Available)
- Reference Architecture**: Deploy a containerized Jenkins CI/CD pipeline by using Terraform on Oracle Cloud Infrastructure. Understand the architecture underlying the successful deployment of a dockerized Jenkin...

[Click here](#)



Exadata Cloud on Oracle Live Labs



SCAN ME

Oracle Autonomous Database Dedicated for Fleet Administrators



As fleet administrator, set up your dedicated ADB platform in the OCI and on Exadata Cloud@Customer.

⌚ 7 hrs

5463 Views

Oracle Exadata Platform Performance Features



Get hands-on with Oracle Exadata, Exadata Database Service on Cloud@Customer, and Exadata Database (..)

⌚ 1 hr, 20 mins

717 Views

Get Started with Oracle Exadata Database Service on Cloud@Customer



Explore getting started with Oracle Exadata Database Service on Cloud@Customer.

⌚ 1 hr

[Click Here](#)



SCAN ME

Exadata Cloud at Customer on Up to August, 31th 2023

The screenshot shows a video player interface. At the top, there's a navigation bar with 'MyLearn | Oracle University' and a search bar 'What do you want to learn?'. Below the navigation is a breadcrumb 'Course : Oracle Base Database Services Professional Workshop'. The main area features a video thumbnail on the left with the text 'Mission-critical cloud database capabilities where you need them' and an 'Oracle.com/exadata' link. To the right of the thumbnail, the video title 'Exceptional Performance, Availability, and Security' is displayed, followed by a bulleted list: '• Superior architecture with unique software optimizations', '• Full-stack redundancy and integrated disaster recovery', and '• Defense in-depth security'. The video progress bar shows '28:56 / 30:20'. Below the video player, the course title 'Database Services Oracle Base Database Services Professional (2023)' is shown, along with a 'Data Architect' badge.

The screenshot shows the 'Playlist' tab of the course interface. At the top, there are tabs for 'Playlist', 'Student Guides', and 'About'. Below the tabs, the course title 'Course 7h 41m' is shown with a progress bar indicating 2% completion. There are also 'SEARCH', 'SKILL CHECKS', and 'AUTOPLAY' buttons. The main content area displays a list of video lessons under the heading '2 : Exadata Database Service':

- Exadata Database Service Overview (30m) - marked with a green dot
- Exadata: Network, Infrastructure, VM Cluster Overview (28m)
- Exadata Infrastructure and VM Cluster Management (28m)
- Database Lifecycle Management (38m) - marked with a 'New' badge
- Management Tools (21m) - marked with a 'New' badge

[Click Here](#)



OPN Web Page

Oracle PartnerNetwork (OPN) Members

Welcome to the OPN Portal!

Expertise is the cornerstone of OPN - customer success is the reward.

The OPN Portal provides guidance to enable your journey to customer success and make partnering with Oracle as simple as possible.

- **Build Expertise** leveraging skills transfer, environments and technical assistance
- **Go-to-Market** using tools and guidance on how to take your solutions and services to market
- **Stay Connected** with the latest OPN has to offer and ask questions in our Partner Community Forums
- **Manage Your Membership** by monitoring your Expertise achievements, executing agreements, updating your Partner Finder profile, and more

We are stronger together. Log in today and let's get started!



Have you heard?



[Click here](#)

4 Steps to Marketing Success

Take a quick tour now of the marketing resources available to you from Oracle. This Partner's Guide to Oracle Marketing Resources infographic will help you explore and discover valuable steps to boost your business.

[Get Started](#)

Stay Connected with the Latin America Partner Community!

Information, collaboration and training all in a single spot.

The [**LAD Partner Community**](#) is a space dedicated to our partners in Latin America, where you can find information and stay up to date on what OPN has to offer.

In the Community, you will find all the information that we communicate to our ecosystem by email.

- Explore [**Categories**](#): organized by grouping publications on a same topic;
- Access the [**Recent Discussions**](#) tab to check the latest posts published;
- Take part in [**Groups**](#) and interact with Oracle Experts and other partners;
- Recordings.

Important: An Oracle SSO account is required to access the Community and other OPN resources. If you don't have this account yet, access [this link](#) or the QR code below.

Access the Community:



Create your SSO account:





Thank You 😊

Questions / Feedback / Training Suggestions

alexandre.af.fagundes@oracle.com

marcel.lamarca@oracle.com

Ask for help 😊

ORACLE

