



ORACLE

From SR to Patch

Virtual Classroom Series – Episode 17



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dohdatabase



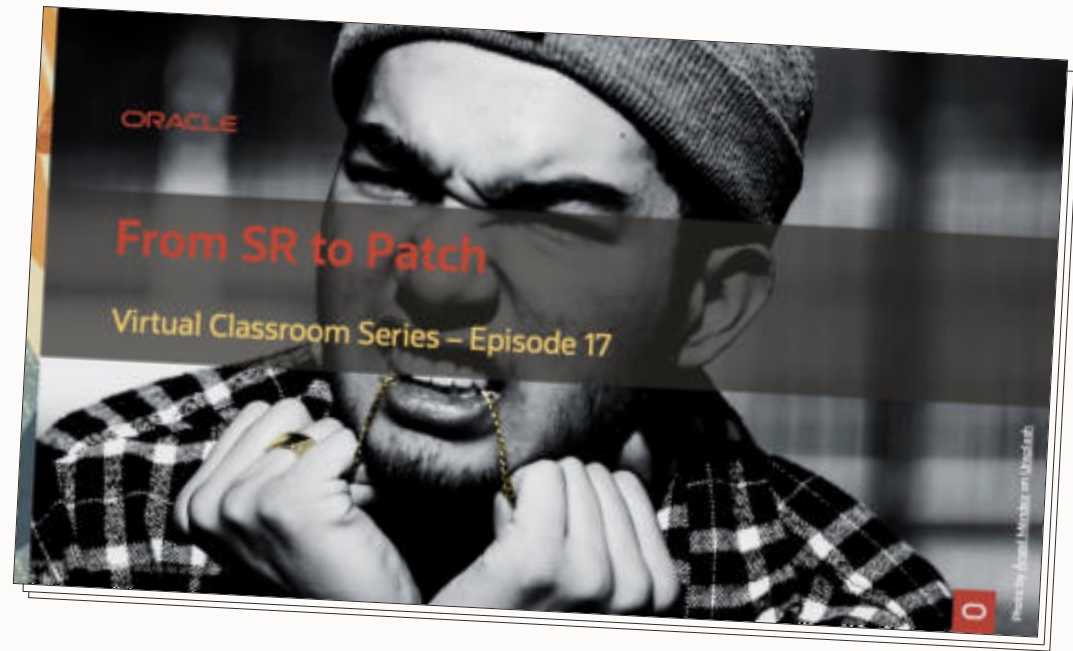
@dohdatabase



<https://dohdatabase.com>

Webinar | Get The Slides

<https://MikeDietrichDE.com/slides>



Episode 1

Release and Patching Strategy

105 minutes – Feb 4, 2021



Episode 2

AutoUpgrade to Oracle Database 19c

115 minutes – Feb 20, 2021



Episode 3

Performance Stability, Tips and Tricks and Underscores

120 minutes – Mar 4, 2021



Episode 4

Migration to Oracle Multitenant

120 minutes – Mar 16, 2021



Episode 5

Migration Strategies – Insights, Tips and Secrets

120 minutes – Mar 25, 2021



Episode 6

Move to the Cloud – Not only for techies

115 minutes – Apr 8, 2021



Recorded Web Seminars

<https://MikeDietrichDE.com/videos>

More than 30 hours of technical content,
on-demand, anytime, anywhere





REALITY CHECK

A true customer story



BIG PROBLEM!!

**You open an SR
You work with Oracle Support
And at worst case ...**



My Oracle Support

Welcome

Search our Knowledge base and engage Communities to learn about products, services, and to find help resolving issues

[→\] Login to My Oracle Support](#)

... you hit a bug!!



A photograph of two men in a playful struggle. The man on the left has blonde hair and is wearing a yellow long-sleeved shirt with a red bow on the back. The man on the right is wearing a plaid shirt and is lifting the other man. They are both laughing. The background is a blurred outdoor setting with buildings and people.

But ... don't worry!
It is fixed! In Oracle 23c!



Hmm??

You mean in
2023?

THREE PARTIES

- You
- Oracle Support
- Oracle Development

Insights into the Patching Process



ERROR



FIX



BACKPORT



INCLUSION

- Report via My Oracle Support
- Service Request inspected by automation



How many Service Requests are solved
by automation within one day?



Automation solves 60 % of
all Service Requests within a day

Insights into the Patching Process



ERROR



FIX



BACKPORT



INCLUSION

- Support Engineer creates a bug
- Help us help you:
 - Clear description
 - Reproducible test case
 - Logs, traces, dumps
 - Various release tests

Bug 41886745 : ORA-600 [happens_on_mondays_only] before java is brewed

▼ Bug Attributes

Type	B - Defect	Fixed in Product Version	
Severity	2 - Severe Loss of Service	Product Version	19.17.0.0.0
Status	10 - New	Platform	226 - Linux x86-64
Created	Oct 17, 2022	Platform Version	ORACLE LINUX 7
Updated	Oct 17, 2022	Base Bug	N/A
Database Version	19.17.0.0.0	Affects Platforms	Generic
Product Source	Oracle	Knowledge, Patches, Service Requests and Bugs related to this bug	

▼ Related Products

Line	Oracle Database Products	Family	Oracle Database Suite
Area	Oracle Database	Product	5 - Oracle Database - Enterprise Edition

Hdr: 41886745 : ORA-600 [happens_on_mondays_only] before java is brewed
Abstract: Happens on most important sales table. Sales are yelling ... loudly



When your case needs further attention



1.
Update the SR
and raise severity



2.
Call Oracle Support

[Blog Post: Request Management Attention for your SR](#)

Insights into the Patching Process



ERROR



FIX



BACKPORT



INCLUSION

- Developer creates a fix
- Always in MAIN branch first

Insights into the Patching Process



ERROR



FIX



BACKPORT



INCLUSION

- Developer verifies the fix
- Regression tests on *Farm* in OCI
 - Subset of tests before merge
 - All tests run daily, ~1 million functional tests (runtime ~25.000 hours)

Insights into the Patching Process



ERROR



FIX



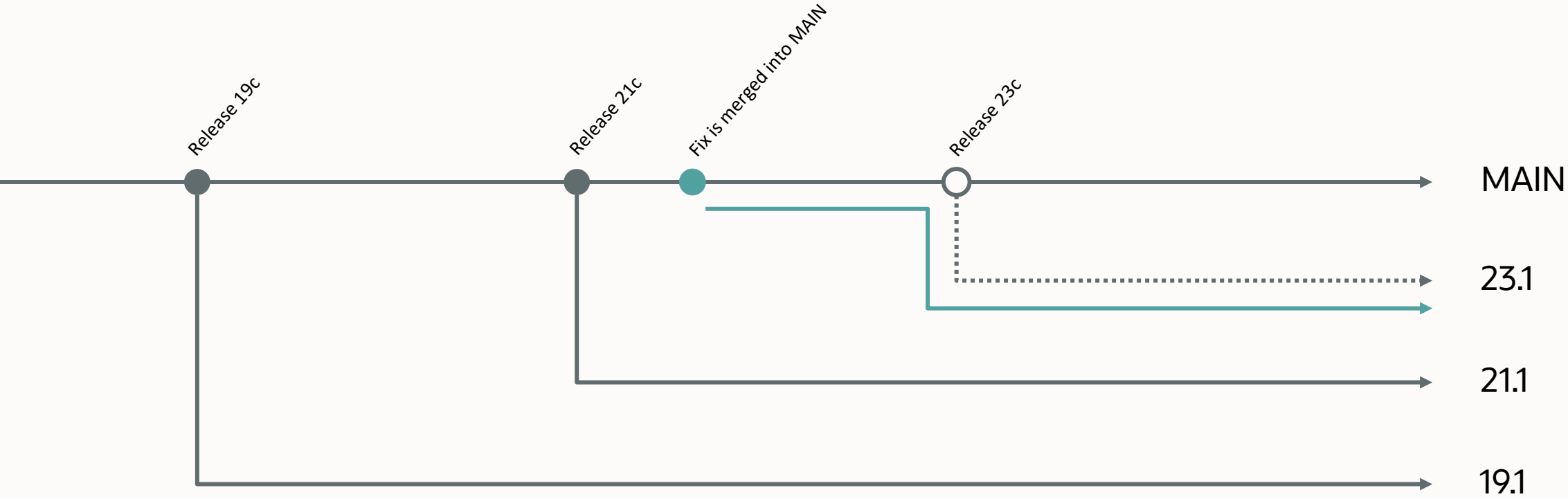
BACKPORT



INCLUSION

- In case, fix isn't working as expected?
 - Fix the fix
 - Regression tests again
- Fix is ok?
 - Merge into MAIN
 - Merge can only happen with no failing tests

Branches





▼ Bug Attributes

Type	B - Defect	Fixed in Product Version	23.1
Severity	2 - Severe Loss of Service	Product version	19.17.0.0.0
Status	80 - Development to QA/Fix Delivered Internal	Platform	226 - Linux x86-64
Created	Oct 17, 2022	Platform Version	ORACLE LINUX 7
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Hdr: 41886745 : ORA-600 [happens_on_mondays_only] before java is brewed
Abstract: Happens on most important sales table. Sales are yelling ... loudly



**Should I
upgrade to
Oracle 23c now?**

But there is only the 23c Free Edition??

A photograph of two women sitting on a brown leather sofa in a cozy living room. The woman on the left, with dark skin and short hair, is wearing a white cable-knit sweater and blue jeans, laughing heartily while holding a small, wrapped gift. The woman on the right, with light skin and glasses, is wearing a blue beanie, a green sweater, and blue jeans, smiling and looking at a blue laptop. The sofa has patterned cushions, and the background shows a white door and wooden paneling.

No worry ...

... you will request and get a backport!!

Insights into the Patching Process



ERROR



FIX



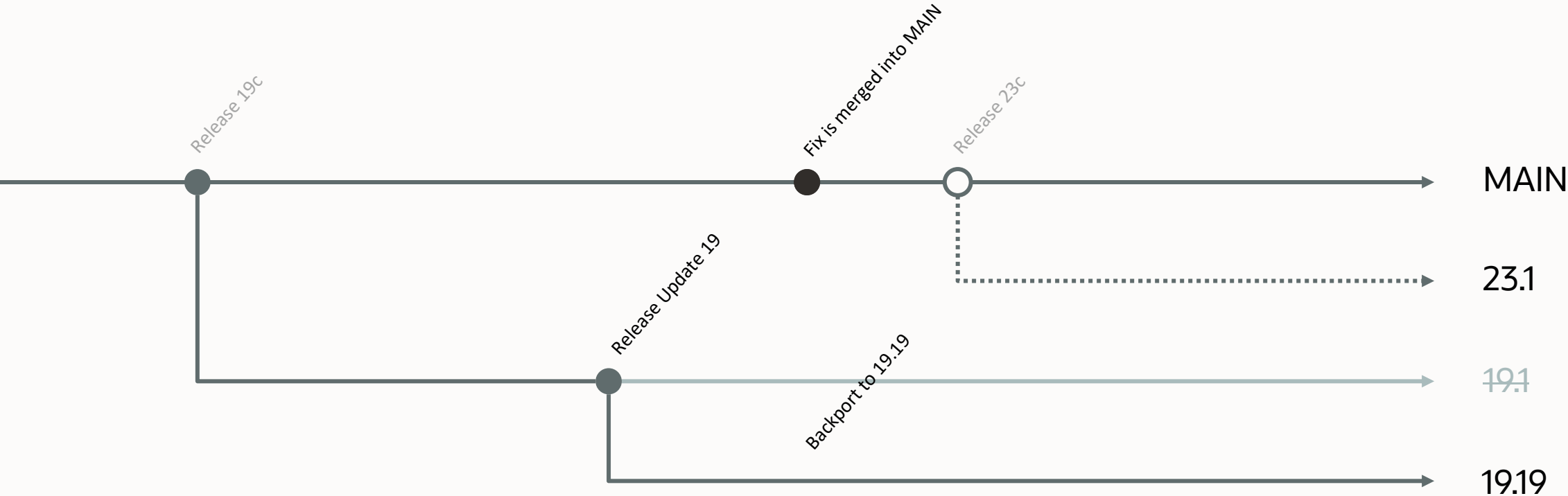
BACKPORT



INCLUSION

- Backport created on request
- Backports are specific for a release and usually also for a patch level, e.g., on top of 19.19.0
- `opatch lsinventory`

Backport



Insights into the Patching Process



ERROR



FIX



BACKPORT



INCLUSION

- Automated flow, manual handling might be required
 - Some conflicts
 - Dependencies
- Manual handling may postpone patch delivery

Patch Simple Search Results

Filters: Patch Name or Number is 31517417; Platform is Linux x86-64;

Edit Search

Table View  Detach  Share Link

Patch Name	Description	Release	Platform (Language)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.16.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.15.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.14.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.13.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.12.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.11.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.10.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.9.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.8.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.6.0.0.0DBRU	Generic Platform (American English)
31517417	ORA-22308: OPERATION NOT ALLOWED ON EVOLVED TYP (Patch)	19.4.0.0.0DBRU	Generic Platform (American English)

19.7.0 missing





Why is the patch not in
the next Release Update?

Insights into the Patching Process



ERROR



FIX



BACKPORT



INCLUSION

- What goes into a Release Update?
- Screening and monitoring for candidates
- Support can request inclusion via base bug

Request for Inclusion

Recommended Patches for 19.18 DB Home

Below is the list of important patches to consider applying on top of 19.18. In addition to the relevant patches listed below, you should also review patches in [Database PSU/BP/Update/Revision - Known Issues Primary Note\(Doc ID 1227443.1\)](#) and [Oracle Database Patches to Consider for 19c \(Doc ID 2781612.2\)](#) which contains patches to consider for specific areas such as Data Pump, Golden gate etc.

Bug	Fixed in RU	Fixed in MRP	Description	Patches	NON ROLLING	Added
35037877 (replaces 20289608)			[SECURITY] EM patching may fail with ORA-4067	[list-patches]		20-APR-2023
32727143	19.19		[SQL EXECUTION] Transaction-level content isolation for transaction-duration global temporary tables	[list-patches]		20-APR-2023
34557500 (replaces 31544097)	19.19	DBMRP 19.17.0.0.230321 , DBMRP 19.18.0.0.230321	[BLOCK TRACK] CTWR caused multiple instances to hung state on the RAC Standby DB	[list-patches]		20-APR-2023
34340632			[AQ] Smart Monitoring & Resiliency in AQ KGL Memory Usage To Help Message Cleanup And Prevent ORA-600 [KGL-HEAP-SIZE-EXCEEDED].	[list-patches]		14-APR-2023
35246710 (replaces 33803836)	19.19	DBMRP 19.18.0.0.230418	[BUFFER CACHE] High "Direct Path Read" Waits After 19.18 DBRU Patching	[list-patches]		08-APR-2023
34832725 (replaces			[SHRD CRSRS] ORA-4031 and / or High Shared Pool Latch Contention During Session Creation in	[list-patches]		25-MAR-2023

Request for Inclusion

BUG 32765738 - AIM:ORA-7445 [KEWSSYSVF_1] - KEWSSYSVF_1

[Edit this bug](#) [Bug Tree](#) [ARU Report](#)

Bug No:

32765738 (Bug)

Filed By:

Updated By:

Sup Rep:

Customer:

Status:

80 - Development to QA/Fix Delivered Internal

BUG 32765738 - AIM:ORA-7445 [KEWSSYSVF_1] - KEWSSYSVF_1

[Edit this bug](#) [Bug Tree](#) [ARU R](#)

Bug No: 32765738

Filed By:

Updated By:

Sup Rep:

Customer:

Status: 80 - Development to QA/Fix Delivered Internal

SRs in Bug Hierarchy: Open: 12 Others: 274 ([Show Details](#))



Automatic Incident Management

Automatic Incident Management

- Scans for incidents
- Monitors also shared autonomous databases
- Automatically creates bugs
- Report and fix bugs before customers



Ensure your Service Request is associated with the corresponding bug

Insights into the Patching Process



ERROR



FIX



BACKPORT





INCLUSION

- Evaluated for Release Update inclusion
- Strict requirements apply
 - RAC Rolling
 - Standby-First

Inclusion Evaluation and Criteria

Close



Patch 30978304: ORA-20000 DURING IMPDP WITH STATS AND THE UNIQUE INDEX FOR THE PK IS NOT CREATED

Last Updated

Jun 2, 2021 2:04 PM (2+ months ago)

Product

Oracle Database - Enterprise Edition

(More...)

Release

Oracle Database 19.12.0.0.0 DBRU

Platform

Generic Platform

Size

1.3 MB

Download Access

Software

Classification

General

Patch Tag

Release

Oracle Database 19.12.0.0.0 DBRU

Platform


Generic Platform

Language


American English

Read Me

Download

 Add to Plan

Analyze with OPatch...

 Discuss this patch in the community

Prerequisite Patches

32904851


DATABASE RELEASE UPDATE 19.12.0.0.0

Bugs Resolved by This Patch

30978304

ORA-20000 DURING IMPDP WITH STATS AND THE UNIQUE INDEX FOR THE PK IS NOT CREATED

View Related Knowledge to this Patch



Inclusion Evaluation and Criteria

Oracle Database 19 Release 19.12.0.0.210720DBRU

ORACLE DATABASE Patch for Bug# 30978304 for Generic Platforms

This patch is non-RAC Rolling Installable.

This patch is non-Data Guard Standby-First Installable - Please read My Oracle Support Note 1265700.1 <https://support.us.oracle.com/oip/faces/secure/km/DocumentDisplay.jspx?id=1265700.1>
Oracle Patch Assurance - Data Guard Standby-First Patch Apply for details on how to remove risk and reduce downtime when applying this patch.

NEVER INCLUDED

(1) Prerequisites

Before you install or deinstall the patch, ensure that you meet the following requirements:

Insights into the Patching Process



ERROR



FIX



BACKPORT



INCLUSION

- Limited number of fixes per Release Update
- Release Updates and Revisions regression tests

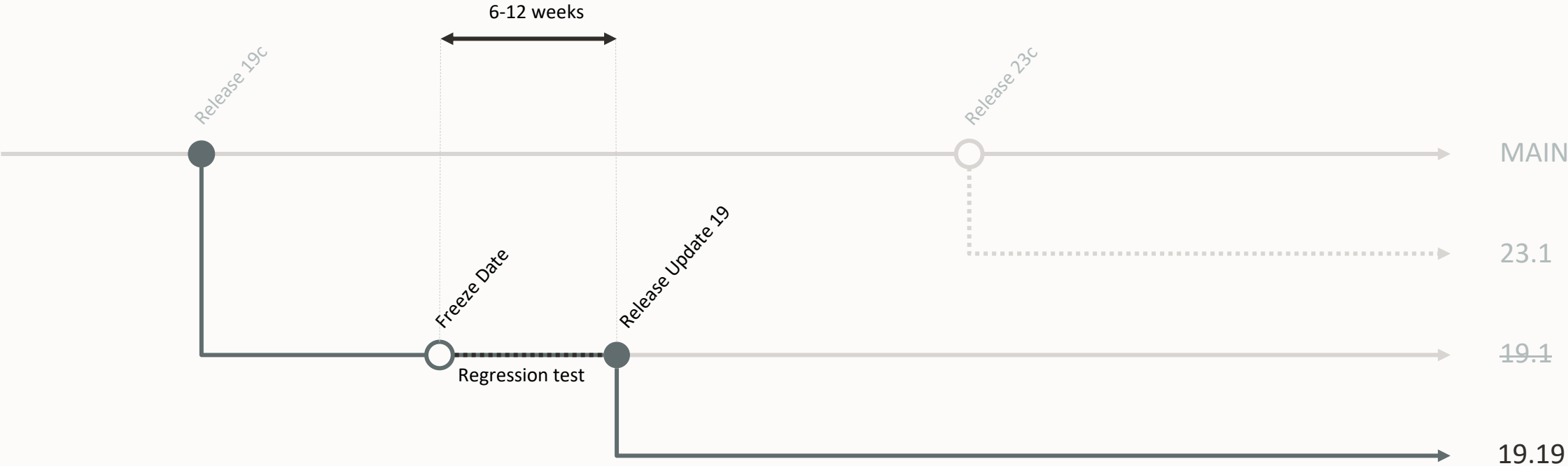
Limitation



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



Limitation



WHY DO YOU ALWAYS ASK FOR

OPATCH Isinventory



TO AVOID

CONFLICTS



```
$ORACLE_HOME/OPatch/opatch prereq CheckConflictAgainstOHWithDetail -ph ./
```

Invoking prereq “checkconflictagainstohwithdetail”

ZOP-40: The patch(es) has conflicts with other patches installed in the Oracle Home (or) among themselves.

Prereq “checkConflictAgainstOHWithDetail” failed.

Summary of Conflict Analysis:

There are no patches that can be applied now.

Following patches have conflicts. Please contact Oracle Support and get the merged patch of the patches :

35012562, 35095748

Conflicts/Supersets for each patch are:

Patch : 35095748

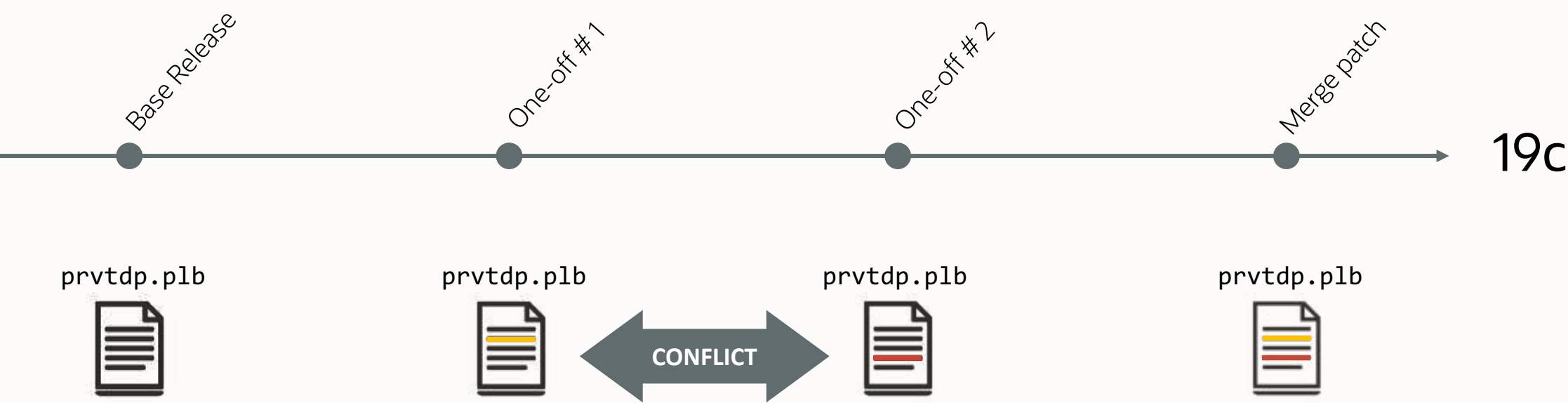
Conflict with 35012562

Conflict details:

/u01/app/oracle/product/19.19.0/db_1/lib/libserver19.a:kko.o

OPatch succeeded.

Basic Facts | Conflicts





Always attach the output of
`opatch lsinventory` to your Service Request



Don't name it

- `optch_lsinvnt.txt`
- `tekst_fra_opatch.txt`
- `alle_meine_patches.txt`
- `textodeopatch.txt`



Just name it `opatch_lsinventory.txt`

But ... I am on MS Windows ...



Windows is different ...



Please wait while we install a system update



Windows Bundle Patches is the term used
for Release Updates on Windows



A Windows Bundle Patch and a Release Update from the same quarter, e.g., April 2023, do **not** contain the same patches

Comparing Release Updates and Bundle Patches



19.19.0 Linux Release Update

- 533 bug fixes
- 5 were not in the Windows bundle patch

19.19.0 Windows Bundle Patch

- 153 additional bug fixes
- 528 bug fixes in common



Where do I find the Windows Bundle Patches?

Knowledge

RCA

DWB

Customer Exceptions

CMS

More...



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Assistant: Download Reference for Oracle Database/GI Update, Revision, PSU, SPU(CPU), Bundle Patches, Patchsets and Base Releases (Doc ID 2118136.2)

Visibility: EXTERNAL

(94)



Selection(s)

What would you like to download?

- ☐ Oracle Database Base Releases
- ☐ Oracle Database Patchsets
- ☐ Oracle Database Release Updates (RUs)
- ☐ Oracle Database Release Update Revisions (RURs - discontinued since Apr 2023)
- ☐ Oracle Database PSU, SPU(CPU), Bundle Patches (Versions 12.1 & lower)
- ☐ OJVM Update/PSU/Bundle Patches
- ☒ Latest Available Microsoft Windows Patches
- ☐ Monthly Recommended Patches (MRPs)

Solution(s)

Possible Solutions w
you make your selec

Basic Facts | Patch Availability

MOS Note: 2118136.2 - Assistant: Download Reference for DB and GI Patch Bundles

Selection(s)

What would you like to download?

- ☐ Oracle Database Base Releases
- ☐ Oracle Database Patchsets
- ☐ Oracle Database Release Updates (RUs)
- ☐ Oracle Database Release Update Revisions (RURs - discontinued since Apr 2023)
- ☐ Oracle Database PSU, SPU(CPU), Bundle Patches (Versions 12.1 & lower)
- ☐ OJVM Update/PSU/Bundle Patches
- ☒ Latest Available Microsoft Windows Patches
- ☐ Monthly Recommended Patches (MRPs)

Related Information

19.0.0.0

Description	Bundle Patch	OJVM
19.19.0.0.230418	35046439	35050341
19.18.0.0.230117	34750795	34786990
19.17.0.0.221018	34468114	34411846
19.16.0.0.220719	34110685	34086870
19.15.0.0.220418	33829175	33808367

Patch Details

Details for Patch 33829175 not found.



Basic Facts | Patch Availability

MOS Note: 2844795.1 - Apr 2022 Patch Availability Document (DB-only) (Doc ID 2844795.1)

Released April 19, 2022

This document contains the following sections:

- [Critical Patch Update April 2022 Patch Availability Document \(PAD\)](#)
 - [1 Overview](#)
 - [1.1 How To Use This Document](#)
 - [1.2 Terminology in the Tables](#)
 - [1.3 On-Request Patches](#)
 - [1.4 CPU Program and My Oracle Support Patch Recommendations](#)
 - [1.5 My Oracle Support \(MOS\) Conflict Checker Tool](#)
 - [2 What's New in April 2022](#)
 - [2.1 "Final CPU Information \(Error Correction Policies\)"](#)
 - [2.2 "Post Release Patches"](#)
 - [2.3 "Separate PADs for Separate Products"](#)

Patch Details

Details for Patch 33829175 not found.

Microsoft Windows BP 21.15.0.0.220419	Patch 33829143	MS-Windows	14-Jun-2022
Microsoft Windows BP 19.15.0.0.220419	Patch 33829175	MS-Windows	17-May-2022





Find the PAD by searching for
Patch Availability Document *Apr 2023*



... Oracle on Windows is different



But this MOS note is missing ...

MOS Note is not accessible

MOS Notes into UNDER REVIEW state without telling you more details

- See blog post "[This MOS note is not available anymore?](#)"

Document cannot be displayed. Possible reasons are:

- The document id was entered incorrectly. Please check and try again.
- The document id does not exist (was referenced incorrectly).
- The document is not classified as publicly accessible ("non-public").
- The content is being updated and it is temporarily unavailable but will be made available again soon.



Just try it again a few days or
open an SR and check with Oracle Support
if you need the content urgently

A photograph of a penguin standing on a large, jagged ice floe in a cold, snowy environment. The penguin is facing away from the camera, looking out over a vast, white landscape. The ice floe is uneven and textured, with some snow piled up. The background is a bright, hazy white, suggesting a snowy or icy terrain under a bright sky.

Oracle Linux Development Platform

Porting



Oracle Linux x86-64

Porting

- Microsoft Windows
- SPARC Solaris
- Intel Solaris x86-64
- IBM AIX
- IBM zLinux
- HP UX Itanium
- BS2000

Some of the platforms from our bug tracking system

Blast from the past

Blast from the Past | Platforms

Microsoft Windows Phone	Tekelec	Netra X3-2 for Acme Packet	Novell NetWare
Oracle JRockit Virtual Edition x86	Qualcomm Brew MP	Oracle Solaris on SPARC (64-bit)	Linux on IBM Z
SunOS	Netra Server X5-2 for Communications	IBM S/390 Based Linux (31-bit)	Data General
Monta Vista x86	HP NonStop S-series (Guardian)	Acme Packet 3900	Pyramid
Acme Packet 1100	HP OpenVMS Itanium	SPARC	Talari
iTron	Monta Vista x86-64	Fujitsu MSP-EX	Palm Computing
Embedded Linux on cnMIPS	OpenSolaris	Trusted Solaris	HP NonStop (OSS) on x86
Embedded Linux SH4	SCO Unix	Net-Net 4250	Unisys OS 2200
HP NonStop Itanium (OSS)	Net-Net 9200	HP OpenVMS VAX	HP OpenVMS Alpha
QNX Unix	Symbian EPOC	HP-UX PA-RISC (32-bit)	Acme Packet 3820
Acme Packet 6100	Linux ARM 32-bit VFP HardFP ABI	Acme Packet 6300	FreeBSDx86
Linux MIPS 64-bit	SGI Irix	Microsoft Windows CE	Oracle Solaris Express
Fujitsu BS2000/OSD (SQ series)	ia64	IBM z/OS on System z	VxWorks
Mediatek MTZ	Linux SPARC	StorageTek Hardware	Microsoft Windows (32-bit)
HP NonStop (Guardian) on x86	Oracle Solaris on SPARC (32-bit)	Oracle Solaris on x86 (32-bit)	Sequent
Fujitsu BS2000	HP NonStop Itanium (Guardian)	Fujitsu BS2000/OSD (SX series)	Windows NT
HP Tru64 UNIX	RIM BlackBerry	Linux ARM 64-bit	nCube



Want to know more about

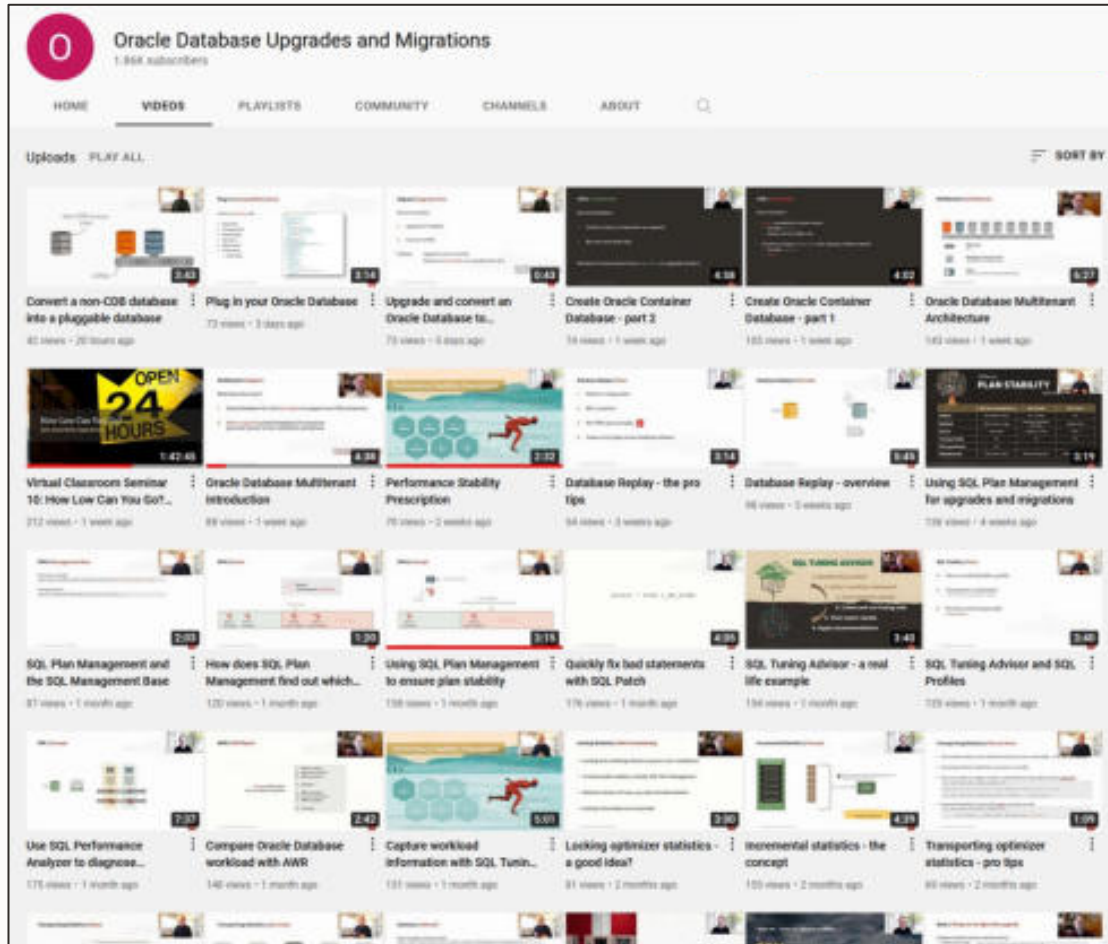
PATCHING

Virtual Classroom 16:

Release and Patching Strategies
for Oracle Database 23c



YouTube | Oracle Database Upgrades and Migrations



[Link](#)

- 300+ videos
- New videos every week
- No marketing
- No buzzword
- All tech



THANK YOU



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[OracleDatabaseUpgradesandMigrations](#)

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Oracle CloudWorld 2023

Las Vegas, September 18-21

[Our sessions](#)

THANK
YOU

