

From SR to Patch

Insider Insights into the Oracle Database Development Process

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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



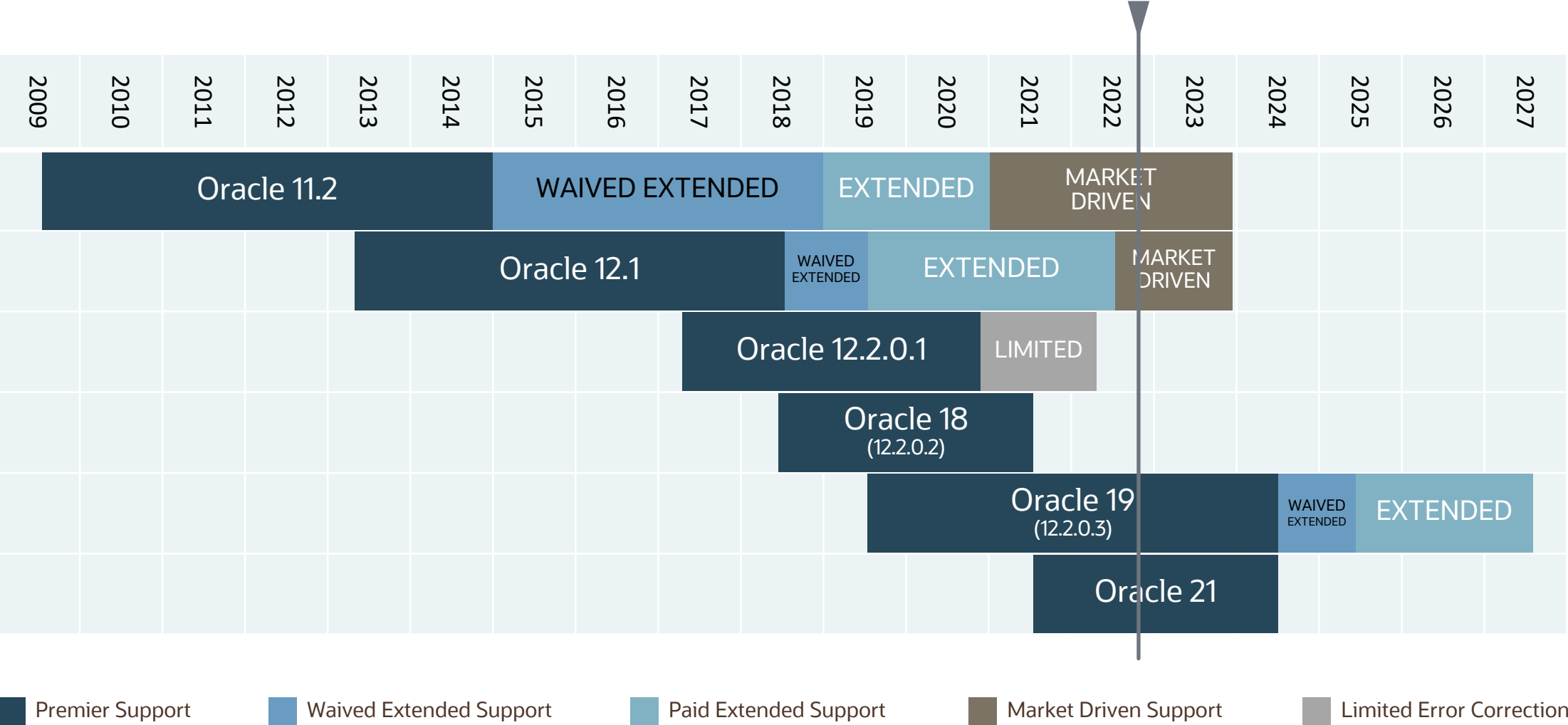
Recorded Web Seminars

<https://MikeDietrichDE.com/videos>

Release and Patching Strategy



Lifetime Support Policy



★ Release Schedule of Current Database Releases (Doc ID 742060.1)

In this Document

[Details](#)

[What's New](#)

[Oracle Database Release Roadmap](#)

[Recommended Upgrade Path](#)

[Oracle Database Release Schedule](#)

[Oracle Public Cloud Releases](#)

[On-Premises Engineered Systems](#)

[On-Premises Server Releases \(includes client\)](#)

[Instant Client-Only Releases](#)

[Actions](#)

[Contacts](#)

[Change History \(2020-2021\)](#)

[References](#)

Lifetime Support Policy

Different Support Periods

■ Premier Support

Bug fixing support regardless of severity

■ Paid Extended Support

Extra cost extension, **10% / 20% extra cost**
Included in ULA/PULA contracts

■ Waived Extended Support

Extended support gets waived to everybody
having a valid Support contract for the product

■ Market Driven Support

Extra cost extension after Extended Support
Fixes done only for critical and security issues

■ Limited Error Correction

Extension for Oracle 12.2.0.1 at **no extra cost**
Only applicable for Sev.1 and security issues

■ Sustaining Support

Oracle Support assists as long as the customer
is using the product – but no new fixes will be delivered



Release Types



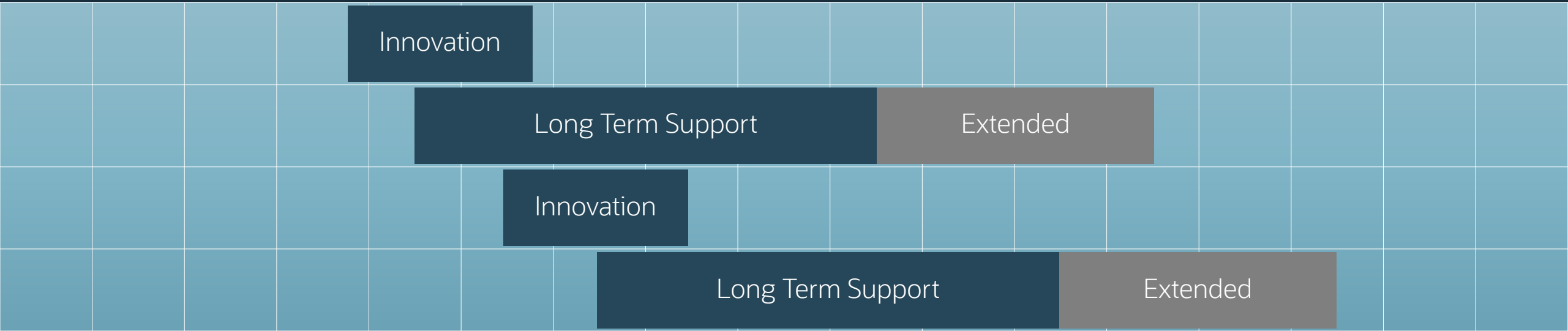
LONG TERM SUPPORT

5+ years of Premier Support followed by
3+ years of Extended Support



INNOVATION

2 years of Premier Support
No Extended Support





Move production databases from one
Long Term Support release to the next



Next Long Term Support release

Oracle Database 23c

Upgrade possible **only** from:

- Oracle Database 19c
- Oracle Database 21c

Want to upgrade?

Oracle Database 11.2.0.4

Oracle Database 12.1.0.2

Oracle Database 12.2.0.1

Oracle Database 18c

Oracle Database 11.2.0.4
Oracle Database 12.1.0.2
Oracle Database 12.2.0.1
Oracle Database 18c



Oracle Database 19c



Oracle Database 23c

Patching





Apply latest Release Update including Monthly Recommended Patches

- Monthly Recommended Patches (MRP)



Release Update

Recommended MOS notes

- [Assistant: Download Reference for Oracle Database/GI Update, Revision, PSU, SPU\(CPU\), Bundle Patches, Patchsets and Base Releases \(Doc ID 2118136.2\)](#)
- [Oracle Database 19c Important Recommended One-off Patches \(Doc ID 555.1\)](#)



Timeline | 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	



Timeline | Monthly Recommended Patches

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



A Real-Life Example



Backwards Compatible

```
SQL> select * from important_sales;
```

```
*
```

```
ERROR at line 1:
```

```
ORA-00600: internal error code, arguments:
```

```
[happens_on_mondays_only], [1], [108], [615], [655], [], [], [], []
```



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](#)

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?





60 % of Service Requests are solved
by automation within one 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, ask for
management attention the right way



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



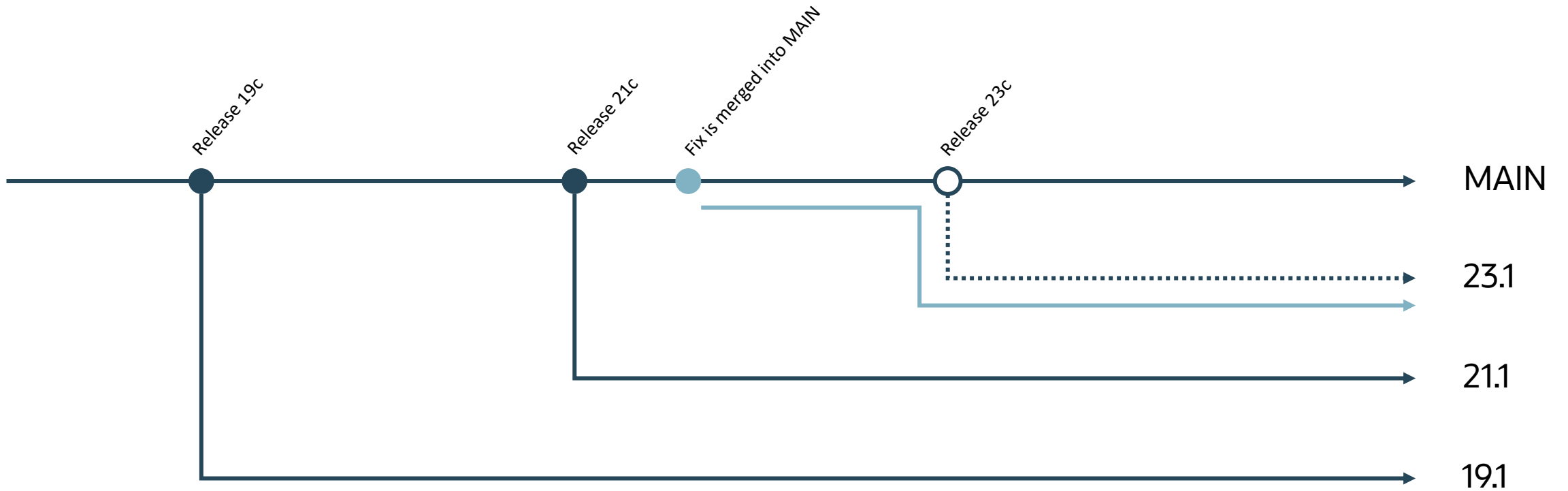
BACKPORT



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
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	

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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



Do I need to upgrade to

Oracle Database 23c

Insights into the Patching Process



ERROR



FIX



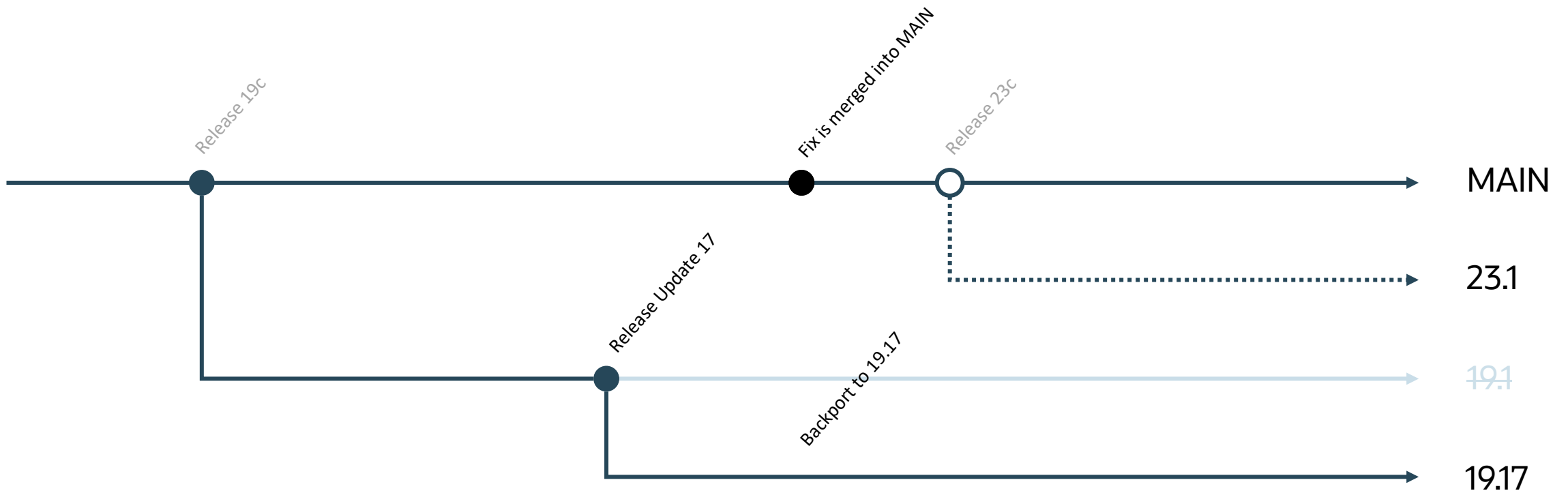
BACKPORT



INCLUSION

- Backport created on request
- Backports are specific for a release and usually also for a patch level, e.g., on top of 19.17.0
- `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)





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



★ Oracle Database 19c Important Recommended One-off Patches (Doc ID 555.1)

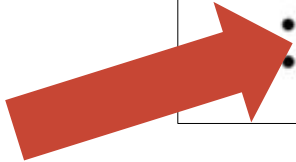
Oracle recommends installing the latest RU. As noted in the tables below, these fixes will be targeted for inclusion in the first possible RU. Refer to "Master Note for Database Proactive Patch Program" ([Document ID 888.1](#)) for the latest RU patch, Bugs Fixed List and Known Issues. This helps you to get the most current content for security, functional, regression and bug fixes as well as minor enhancements and emergency one-offs.

In addition to below patches, review ([Database PSU/BP/Update/Revision - Known Issues Primary Note\(Doc ID 1227443.1\)](#)) and apply patches based on the RU.

The information below lists additional patches(includes both rolling and non-rolling) recommended to be installed on top of each RU.

Select the relevant link for details. Note that this document only shows patches for the latest 4 RU's.

- [Recommended Patches for 19.12 DB Home](#)
- [Recommended Patches for 19.12 GI Home](#)
- [Recommended Patches for 19.11 DB Home](#)
- [Recommended Patches for 19.11 GI Home](#)

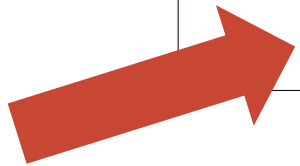


Request for Inclusion

Recommended Patches for 19.11 DB Home

Below is the list of important patches to consider applying on top of 19.11

Bug	Fixed in RU	Description	Patches	Added
32996071	19.12	ORA-600 [kglnlt] Reported When Shutting Down Standby Database	[list-patches]	11/Aug/21
32480419	19.12	"ksipc sga allocation parent latch" contention during concurrent logouts	[list-patches]	06/Aug/21
33144001		RMAN: Restore operations of any kind fail with an ORA-7445 [SIGSEGV] [Address not mapped to object] with "krbipIntLocalize" in call stack.	[list-patches]	06/Aug/21
30978304		ORA-20000 During Data Pump Import While Importing Statistics	[list-patches]	03/Aug/21
32765738	19.12	ORA-7445[kewssysvf_1] Or Other Internal Errors	[list-patches]	29/Jul/21



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: [REDACTED]

Updated By: [REDACTED]

Sup Rep: [REDACTED]

Customer: [REDACTED]

Status: 80 - Development to QA/Fix Delivered Internal



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

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

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](#)

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



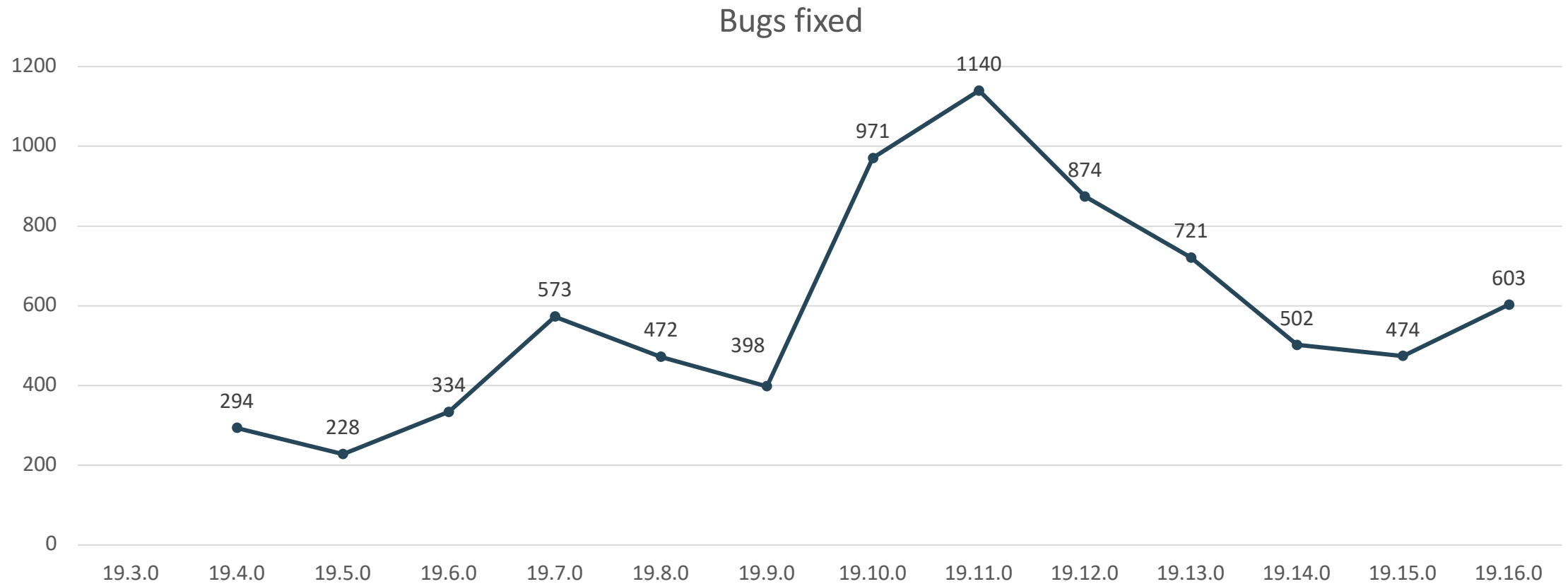
BACKPORT



INCLUSION

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

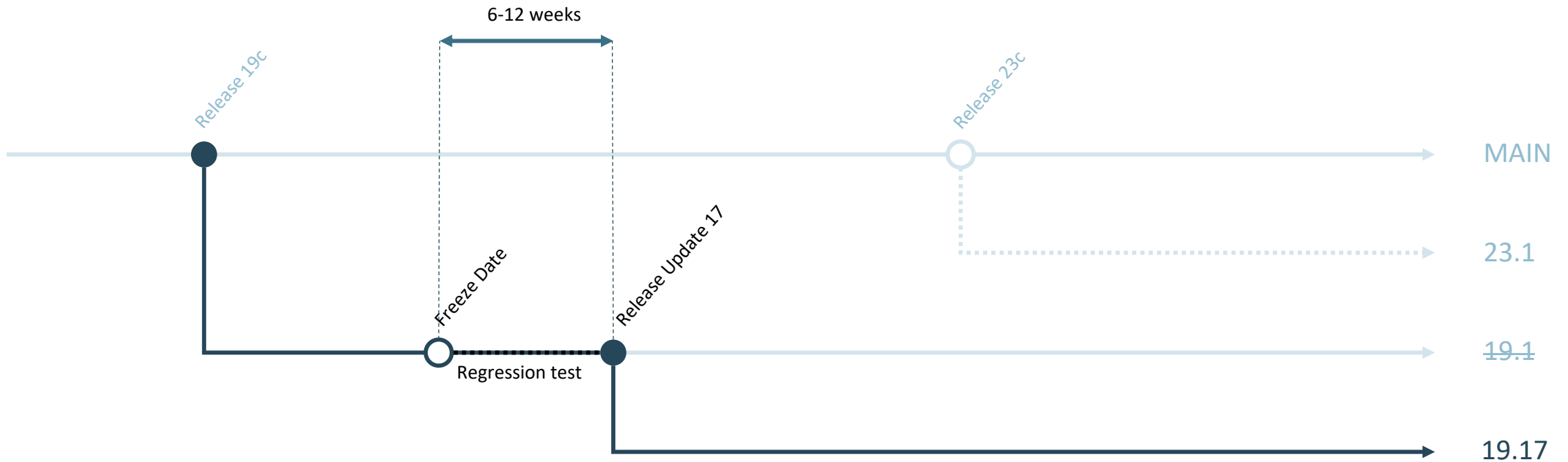
Limitation



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



Limitation





Release Update testing includes
more than 1.000.000 functional tests
running for more than 25.000 hours daily



Release Test

TYPE	DESCRIPTION	RU
Accessibility, User Acceptance Testing	User Experience Testing	
Install, Upgrade, Patching, Porting, Cert Testing	Usability, OS certs, Platform Testing	(X)
Ethical Hacking Testing	Penetration Testing by multiple Ethical Hacking teams	
ADB, Customer workload and Applications Testing	1000s of hours of testing ADB config/scale as well as testing specific customer workloads and Oracle internal apps	X
Performance Testing	Atomics and Benchmark Testing on the Cloud and Exadata	X
Stress and Destructive Testing	1000s of hours of long running tests that stress memory/cpu/io and destructive tests	X
Cloud Scale, Concurrency and Availability Testing	1000s of hours of testing on the Cloud and Exadata	
Security Testing	Static code analysis on every code merge. Memory, SQL Injection, Resource Injection and PL/SQL Security testing on every code merge.	
Cross Functional Testing	5 – 7 Million hours of feature combinations, interoperability & common configs and parameter settings tests	
Functional Testing	> 1 million tests that run for ~25k hours daily on the Cloud	X



How to Apply the Patch

Basic Facts | Patch Types

one-off

Single bug fix on top of the base release or a patch bundle
Sometimes called interim-patch

backport

Fix made for a newer code line, now created on top of the base release or a patch bundle

merge

Multiple one-off fixes combined into a single fix
Required to resolve conflicts

bundle

Many fixes together on top of the base release or another bundle
Usually available on a quarterly schedule
Cumulative

Basic Facts | Patch Types

- [Oracle Database - Overview of Database Patch Delivery Methods for 12.2.0.1 and later MOS Note: 2337415.1](#)



Basic Facts | What Is In A Patch

FILES

New or changed executables, libs or files

```
bin/oracle  
bin/srvctl  
oracore/zoneinfo/timezone_34.dat
```

Apply and rollback scripts

```
sqlpatch/.../nnn_apply.sql  
sqlpatch/.../nnn_rollback.sql
```

SQL PL/SQL

New or changed objects

```
create index sys.i_tab1 ...  
alter table sys.tab$ ...  
create or replace package sys.dbms_scheduler ...
```


Basic Facts | How To Apply A Patch

`$ORACLE_HOME/OPatch`

```
[oracle@hol ~]$ cd $ORACLE_HOME/OPatch
[oracle@hol OPatch]$ ls -l
total 164
drwxr-x---. 6 oracle dba    68 Apr 22  2020 auto
drwxr-x---. 2 oracle dba    31 Apr 22  2020 config
-rwxr-x---. 1 oracle dba   589 Apr 22  2020 datapatch
-rwxr-x---. 1 oracle dba   627 Apr 22  2020 datapatch.bat
drwxr-x---. 2 oracle dba    90 Apr 22  2020 docs
-rwxr-x---. 1 oracle dba 23550 Apr 22  2020 emdpatch.pl
drwxr-x---. 2 oracle dba   4096 Apr 22  2020 jlib
drwxr-x---. 5 oracle dba   4096 Mar 26  2020 jre
drwxr-x---. 9 oracle dba   4096 Apr 22  2020 modules
drwxr-x---. 5 oracle dba    58 Apr 22  2020 ocm
-rwxr-x---. 1 oracle dba 49462 Apr 22  2020 opatch
-rwxr-x---. 1 oracle dba   1442 Apr 22  2020 opatchauto
-rwxr-x---. 1 oracle dba    393 Apr 22  2020 opatchauto.cmd
-rwxr-x---. 1 oracle dba 16412 Apr 22  2020 opatch.bat
-rwxr-x---. 1 oracle dba   4290 Apr 22  2020 opatch_env.sh
-rw-r-----. 1 oracle dba   2551 Apr 22  2020 opatch.pl
drwxr-x---. 4 oracle dba    62 Apr 22  2020 opatchprereqs
-rwxr-x---. 1 oracle dba   3159 Apr 22  2020 operr
-rwxr-x---. 1 oracle dba   4218 Apr 22  2020 operr.bat
-rw-r-----. 1 oracle dba   3177 Apr 22  2020 operr_readme.txt
drwxr-x---. 2 oracle dba    19 Apr 22  2020 oplan
drwxr-x---. 3 oracle dba    21 Apr 22  2020 oracle_common
drwxr-x---. 3 oracle dba    24 Apr 22  2020 plugins
-rw-r-----. 1 oracle dba   2980 Apr 22  2020 README.txt
drwxr-x---. 2 oracle dba   4096 Apr 22  2020 scripts
-rw-r-----. 1 oracle dba    27 Apr 22  2020 version.txt
```

Basic Facts | How To Apply A Patch

opatch	Applies binaries to an Oracle Home	All instances are down
datapatch	Applies SQL and PL/SQL changes to a database	Database is up (normal, not upgrade)

Pro tip: Use `opatchauto` on RAC environments



Basic Facts | Platform

GENERIC

A patch that works for **all** platforms

Changes files that are platform independent

Example: scripts in rdbms/admin and other PL/SQL

PORT SPECIFIC


A patch that works for **one specific** platform



Changes port specific files

Example: oracle.exe on Windows

Basic Facts | Platform

GENERIC



Filters: Patch Name or Number is 30978304;					
Table ▾	View ▾	 Detach	 Share Link		
Patch Name	Description	Release ▴ ▾	Platform (Language)	Recommended	Classification
30978304	ORA-20000 DURING IMPDP WITH STATS AND THE UNIQUE INDEX FOR THE PK IS NOT CREATED (Patch)	19.9.0.0.201020WIN	Generic Platform (American English)		General

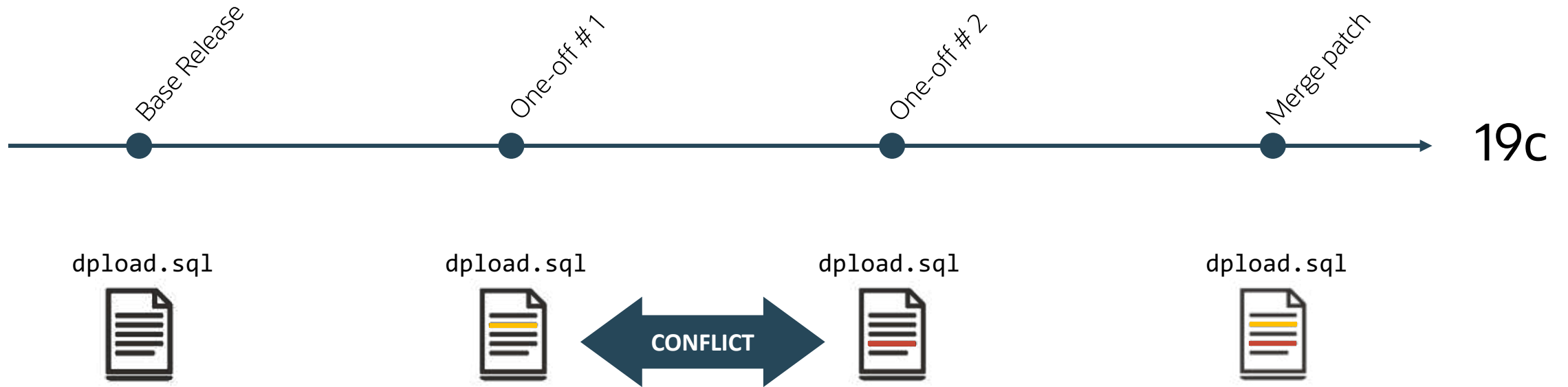
PORT SPECIFIC

Filters: Patch Name or Number is 32164034;					
Table ▾	View ▾	 Detach	 Share Link		
Patch Name	Description	Release ▴ ▾	Platform (Language)	Recommended	Classification
32164034	INTRODUCE UNDERSCORE PARAMETER TO DISABLE RECORDING OF LAST SUCCESSFUL LOGIN TIME (LSLT) (Patch)	19.9.0.0.0DBRU	HP-UX Itanium (American English)		General

Why do you always ask for

OPatch

Basic Facts | Conflicts





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





And give it a meaningful name, such
as `opatch_lsinventory.txt`





Don't name it

- `optch_lsinv.t.txt`
- `tekst_fra_opatch.txt`
- `alle_meine_patches.txt`
- `textodeopatch.txt`



Just name it `opatch_lsinventory.txt`

Windows



Basic Facts | Patch Types

one-off

Rarely created

backport

Rarely created, preferably delivered in bundle patches

merge

Rarely created

bundle

Still called Bundle Patch (BP) and not RU

- Quarterly, usually with delay
- RAC Rolling and Standby-First
- Cumulative



A Windows Bundle Patch and a Release Update
from the same quarter, e.g., October 2022,
does **not** contain the same patches





Where do I find
the bundle patches for Windows?



[Dashboard](#)**Knowledge**[Service Requests](#)[Patches & Updates](#)[More...](#) ▾[Dashboard >](#)[Give Feedback](#)

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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)

[✔](#) [T](#)

Selection(s)

What would you like to download?

- ☐ Oracle Database Base Releases
- ☐ Oracle Database Patchsets
- ☐ Oracle Database Updates (Versions 12.2 & higher)
- ☐ Oracle Database Update Revisions (Versions 12.2 & higher)
- ☐ Oracle Database PSU, SPU(CPU), Bundle Patches (Versions 12.1 & lower)
- ☐ OJVM Update/PSU/Bundle Patches
- ☐ Latest Available Microsoft Windows Patches

Additional Clarification

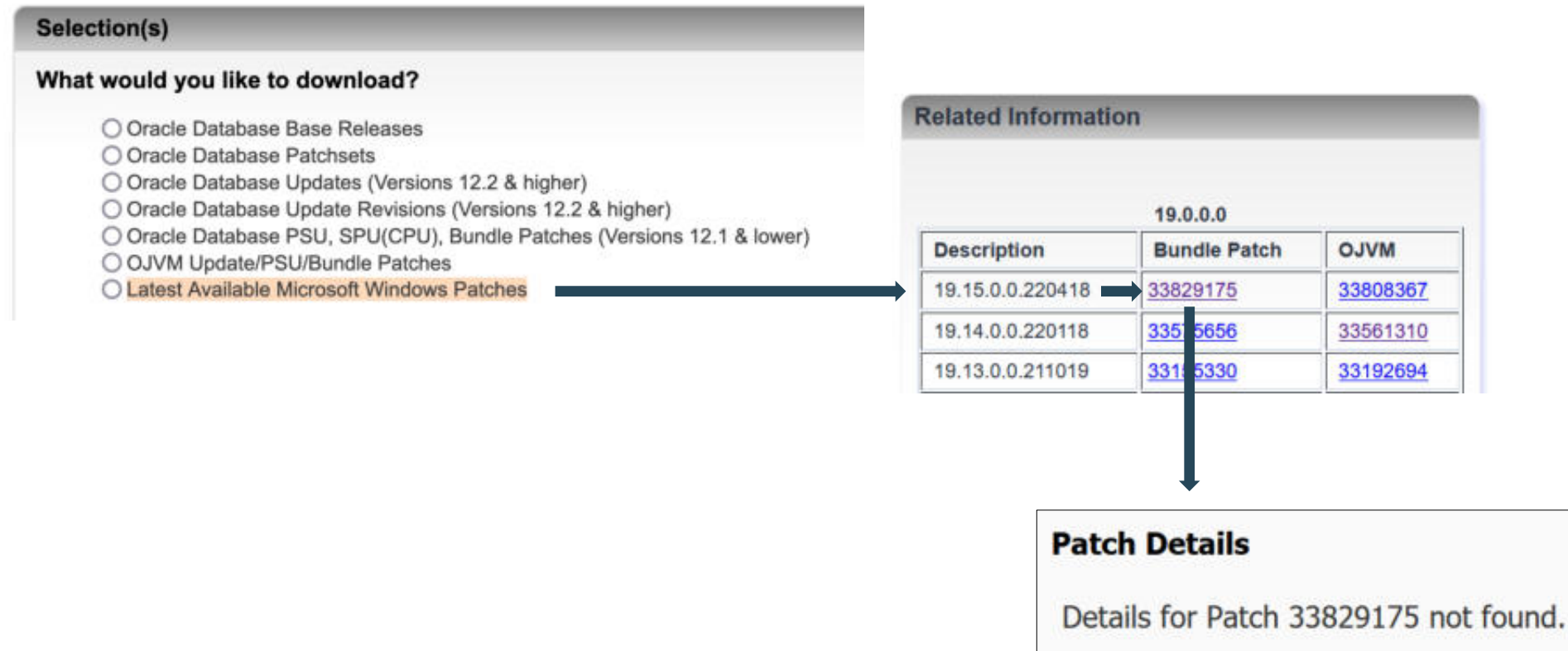
Please select an option above to begin clarifying the issue you are experiencing.

Solution(s)

Possible Solutions will appear once you make your selection.

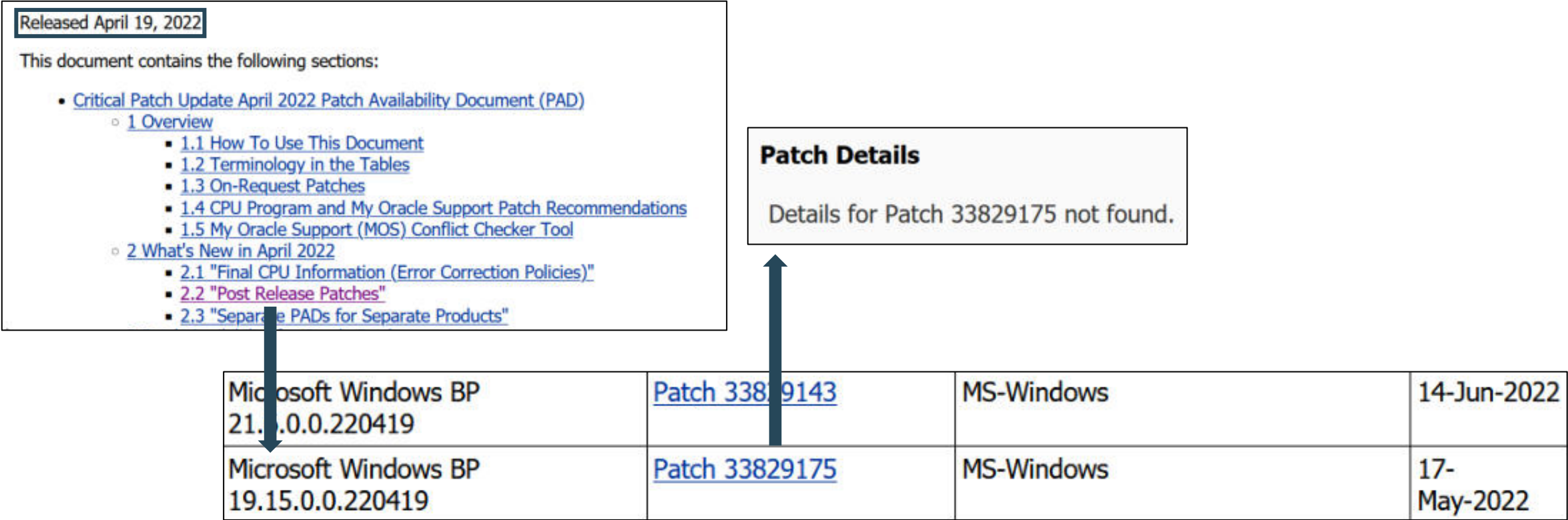
Basic Facts | Patch Availability

- [MOS Note: 2118136.2 - Assistant: Download Reference for DB and GI Patch Bundles](#)



Basic Facts | Patch Availability

- [MOS Note: 2844795.1 - Apr 2022 Patch Availability Document \(DB-only\)](#)





How do I find the Patch Availability Document?





Search for:
"**Apr 2022** Patch Availability Document (PAD)"



KM Search Results

- ☒ Knowledge Base
- ☒ Archive
- ☒ Community
- ☒ Documentation
- ☒ Bug
- ☐ Patch
- ☐ System Handbook

"Apr 2022 Patch Availability Document"

[Start typing to select Product](#)
[Any Product Version](#)
[Any Platform](#)
[Last updated](#)

Results: [Knowledge Base](#) | [Archive](#) | [Community](#) | [Documentation](#) | [Bug](#)

Tips

Try searching [without using quotes](#) or only quote the "important words" in your search.

Recommended Links

- [Why Can't I Download This Patch? - How Patches and Updates Entitlement Works](#) (Doc ID 1369860.1)
- [Oracle Support Lifecycle Advisors](#) (Doc ID 250.2)

Knowledge Base Search Results

- [Critical Patch Update \(CPU\) Program Apr 2022 Patch Availability Document \(DB-only\)](#) (Doc ID 2844795.1)
 Apr 22, 2022
 Refine to [All](#) > [Oracle Cloud](#) > [Oracle Infrastructure Cloud](#) > [Oracle Cloud at Customer](#) > [Gen 1 Exadata Cloud at Customer](#) (Oracle Exadata Database)
- [Critical Patch Update \(CPU\) Program Apr 2022 Patch Availability Document \(EM-only\)](#) (Doc ID 2844807.1)
 Refine to [All](#) > [Enterprise Management](#) > [Enterprise Manager Products](#) > [Managing Databases using Enterprise Manager](#) > [Enterprise Manager for Oracle](#)

Oracle Linux

Our 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

Visit our **DEMO BOOTH**

DB-18

Oracle CloudWorld Hub

Tuesday	13-19
Wednesday	08-18
Thursday	08-14



No Slide Zone - Database Patching Insights

HOL4093	Thursday 09:00	Bellini 2001A , The Venetian, Level 2
HOL4093	Thursday 11:00	Bellini 2001A , The Venetian, Level 2

Oracle Data Pump Deep Dive with Development

LRN3501	Thursday 11:30	Murano 3202, The Venetian, Level 3
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AutoUpgrade 2.0: Internals and New Features

LRN3500	Thursday 13:15	Murano 3202, The Venetian, Level 3
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Cloud Premigration Advisor Tool - Your Cloud Premigration Advisor

LIT4104	Thursday 13:40	Ascend Lounge, CloudWorld Hub, The Venetian
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ORACLE
CloudWorld

Thank you

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