# Out-Of-Place Patching
# The answers to questions of the universe

## Exadata edition

Photo by Subfader on Unsplash

Oracle

# DBAs

run the world

# Safe harbor statement

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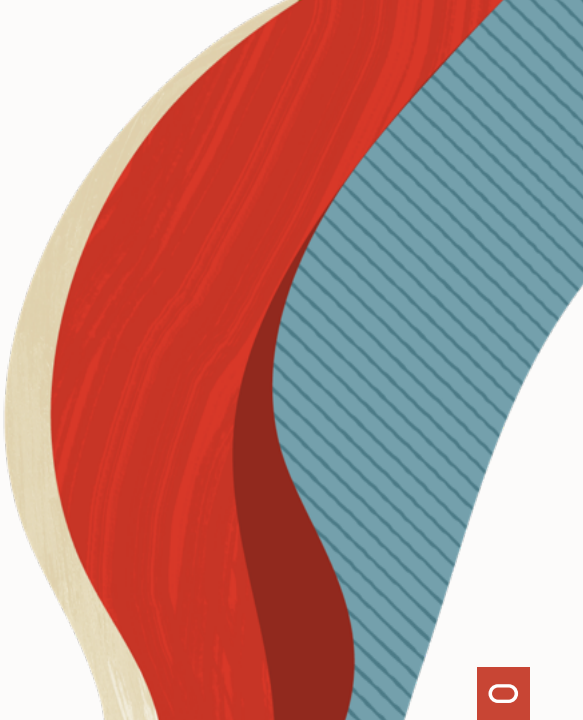
https://dohdatabase.com/

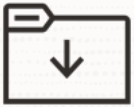
# Patching Best Practices

## Installation

Basics

Methods





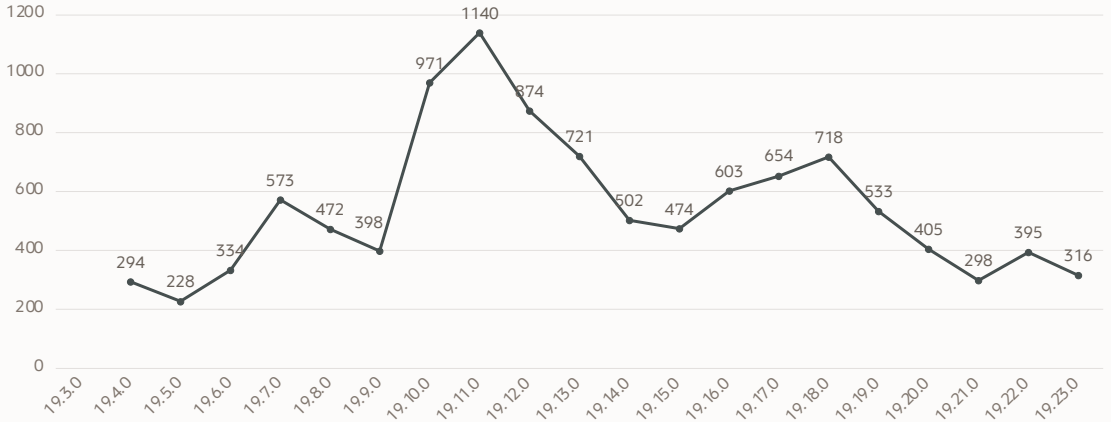
# You always start with Oracle Database base release

- Oracle Database 19.3.0

# Always Apply the Most Recent RU

Use the Patch Download Assistant MOS Note: 2118136.2

# Release Update Contents



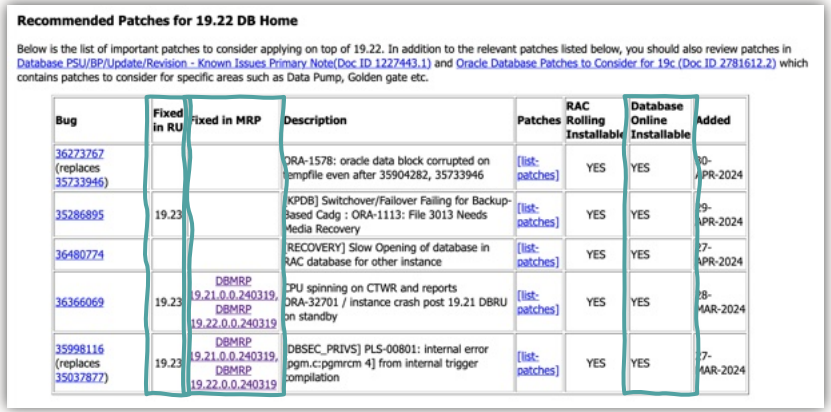

Database 19 Release Updates and Revisions Bugs Fixed Lists (Doc ID 2523220.1)

## If you don't apply a recent Release Update, you will miss thousands of fixes

- Almost 11k fixes with 19.23.0
- Almost 300 security fixes

# Apply the Most Important Patches

Always use Important Recommended One-Off Patches: MOS Note: 555.1



**Recommended Patches for 19.22 DB Home**

Below is the list of important patches to consider applying on top of 19.22. 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 | RAC Rolling Installable | Database Online Installable | Added |
|---|---|---|---|---|---|---|---|
| 36273767 (replaces 35733946) | | | ORA-1578: oracle data block corrupted on tempfile even after 35904282, 35733946 | [list-patches] | YES | YES | 30-APR-2024 |
| 35286895 | 19.23 | | [KPDB] Switchover/Failover Failing for Backup-Based Cadg : ORA-1113: File 3013 Needs Media Recovery | [list-patches] | YES | YES | 29-APR-2024 |
| 36480774 | | | [RECOVERY] Slow Opening of database in RAC database for other instance | [list-patches] | YES | YES | 27-APR-2024 |
| 36366069 | 19.23 | DBMRP 19.21.0.0.240319, DBMRP 19.22.0.0.240319 | CPU spinning on CTWR and reports ORA-32701 / instance crash post 19.21 DBRU on standby | [list-patches] | YES | YES | 28-MAR-2024 |
| 35998116 (replaces 35037877) | 19.23 | DBMRP 19.21.0.0.240319, DBMRP 19.22.0.0.240319 | [DBSEC_PRIVS] PLS-00801: internal error [pgm.c:pgmrcm 4] from internal trigger compilation | [list-patches] | YES | YES | 27-MAR-2024 |

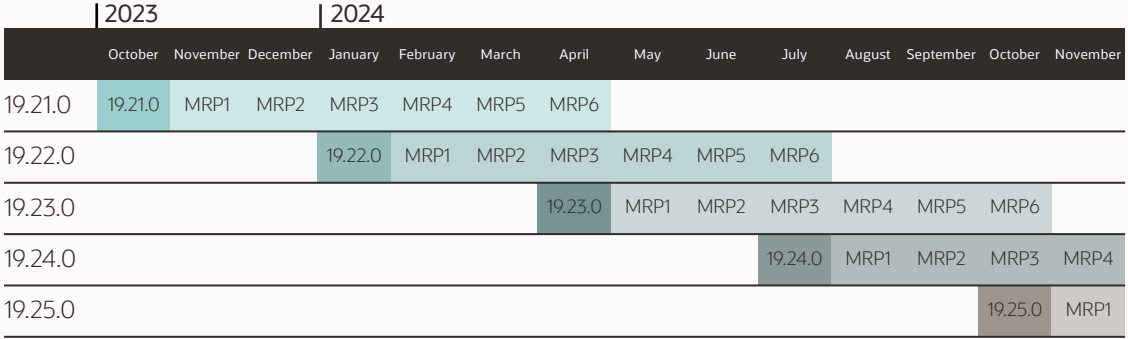
# Monthly Recommended Patches

A collection of recommended one-off fixes
provided at monthly intervals
via a single downloadable patch

# Quarterly Release Updates

| | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | January | April | July | October | January | April | July | October | January | April | July | October | January | April | July |
| 19c | 19.18.0 | 19.19.0 | 19.20.0 | 19.21.0 | 19.22.0 | 19.23.0 | 19.24.0 | 19.25.0 | 19.26.0 | 19.27.0 | 19.28.0 | 19.29.0 | 19.30.0 | 19.31.0 | 19.232.0 |
| 21c | 21.10.0 | 21.11.0 | 21.12.0 | 21.13.0 | 21.14.0 | 21.15.0 | 21.16.0 | 21.17.0 | 21.18.0 | 21.19.0 | | | | | |
| 23ai | | | | | | | 23.5.0 | 23.6.0 | 23.7.0 | 23.8.0 | 23.9.0 | 23.10.0 | 23.11.0 | 23.12.0 | 23.13.0 |

# Monthly Recommended Patches



## An MRP is an optional collection of several important one-off patches

- Delivered as a merge patch

## An MRP does not change the release number

- Like `v$instance.version_full`

## MRPs are cumulative but only within one MRP line

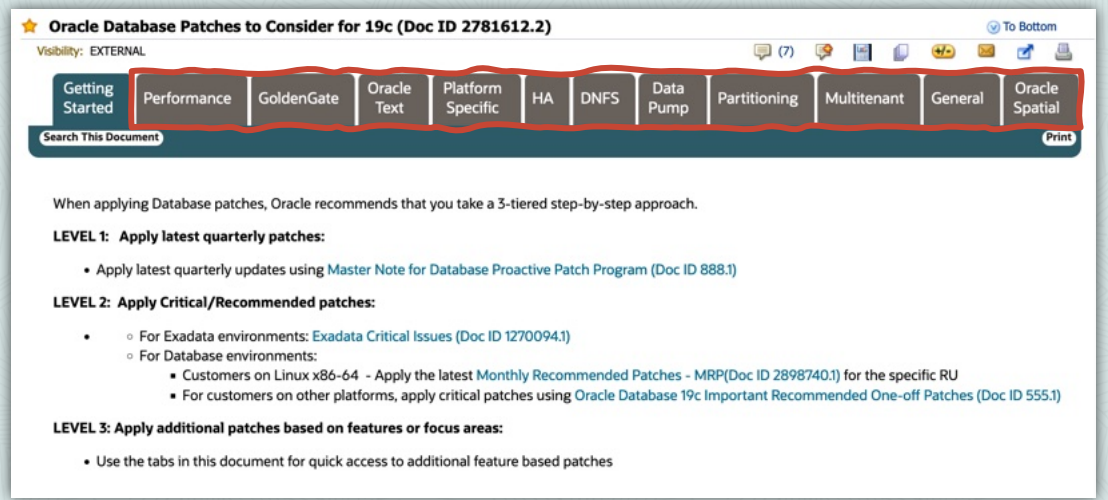
- Example: 19.21.0 MRP6 contains all previous MRPs done for Oracle 19.21.0


MRPs are Linux only

# Sorry, but there is more to talk about …




# Apply Additional Important Fixes and Bundles



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

To Bottom

Visibility: EXTERNAL

(7)

Getting Started | Performance | GoldenGate | Oracle Text | Platform Specific | HA | DNFS | Data Pump | Partitioning | Multitenant | General | Oracle Spatial

Search This Document | Print

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

## Always use the latest OPatch

- Patch 6880880

## Patching Oracle home is faster when you use a brand new home

- Avoid cloned Oracle Homes and In-Place Patching
- Use `./opatch util deleteinactivepatches`

# Installation Tip

```
/home/oracle/stage
├── DPBP
│   ├── 35261302
│   └── PatchSearch.xml
├── MRP
│   ├── 35333937
│   │   ├── 34340632
│   │   ├── 35012562
│   │   ├── 35037877
│   │   ├── 35116995
│   │   └── 35225526
│   └── PatchSearch.xml
├── OJVM
│   ├── 35050341
│   └── PatchSearch.xml
└── RU
    ├── 35042068
    └── PatchSearch.xml
```

## ONE SINGLE COMMAND

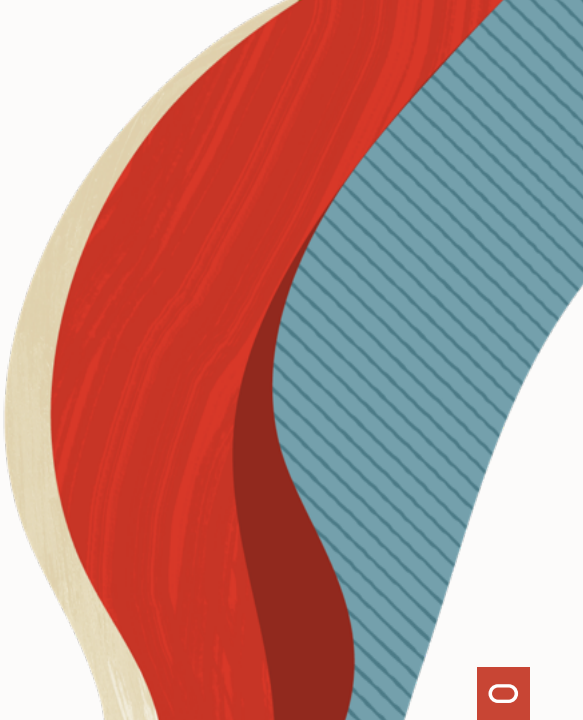
```
./runInstaller \
  -applyRU /home/oracle/stage/RU/35042068 \
  -applyOneOffs /home/oracle/stage/RU/35261302,
                /home/oracle/stage/RU/35050341,
                /home/oracle/stage/RU/34340632,
                ...
                /home/oracle/stage/RU/35225526
```

# Patching Best Practices

Installation

**Basics**

Methods



# What Can Be in a Patch?

## FILES

New or changed executables, libs or files

```
bin/oracle
bin/srvctl
oracore/zoneinfo/timezone_42.dat
```

Apply and rollback scripts

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

## SQL
## PL/SQL

New or changed objects

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

# How to Apply a Patch?

| | | | | |
|---|---|---|---|---|
| `opatch` |  | Applies binaries to an Oracle Home |  | All instances using this Oracle Home are down |
| `datapatch` |  | Applies SQL and PL/SQL changes to a database |  | Database is up |

# What Is Installed?

## In the Oracle Home?

```
$ opatch lsinventory
$ opatch lspatches
```

```
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)

## In the database / PDB?

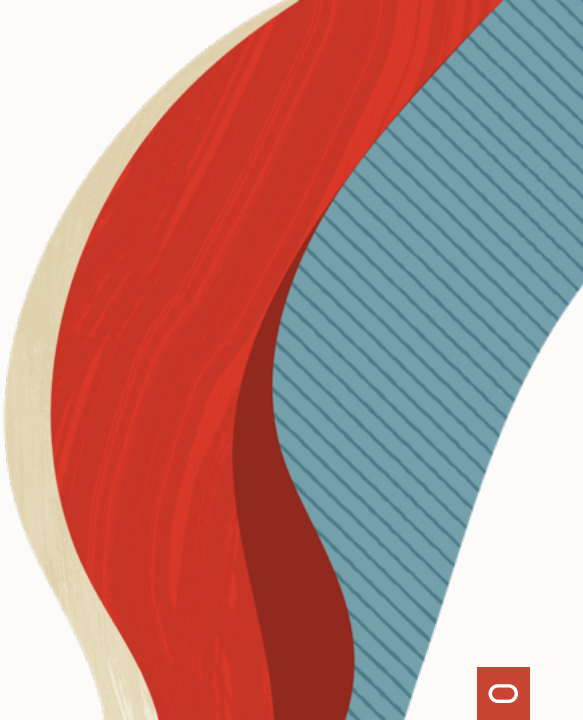
```
SQL> select * from cdb_registry_sqlpatch;
```

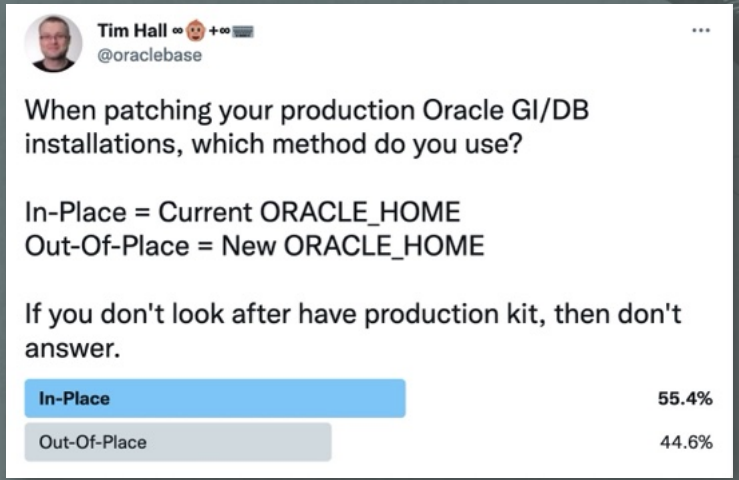
# Patching Best Practices

Installation

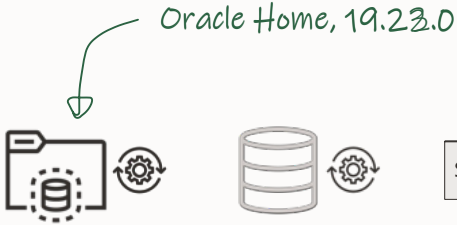
Basics

Methods





# In-Place Patching




```
$ORACLE_HOME/OPatch/opatch rollback -id ...
```

# In-Place Patching

Why is in-place patching such a bad idea?

- You must roll back all one-offs and bundle patches (DPBP, OJVM etc)
- The OraInventory accumulates a massive history
- Downtime is much longer
- The risk is way higher

And for a potential rollback, you need to go through the entire exercise again

# Out-of-Place Patching

Oracle Home, 19.22.0

```
SQL> SHUTDOWN IMMEDIATE
```

```
[oracle]$ $ORACLE_HOME/OPatch/datapatch -verbose
```

New Oracle Home, 19.23.0

# Golden Images

Unzip base release

Replace OPatch with newer version

Deploy all necessary patches

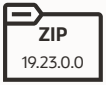
Install with patches

Create Gold Image

Deploy Gold Image to targets

# Creating Oracle Database gold images

```
Install new home
./runInstaller
  -applyRU /home/oracle/stage/RU/35042068
  -applyOneOffs ...
```




```
Create gold home zip
./runInstaller
  -createGoldImage
  –destinationLocation /u01/stage
```

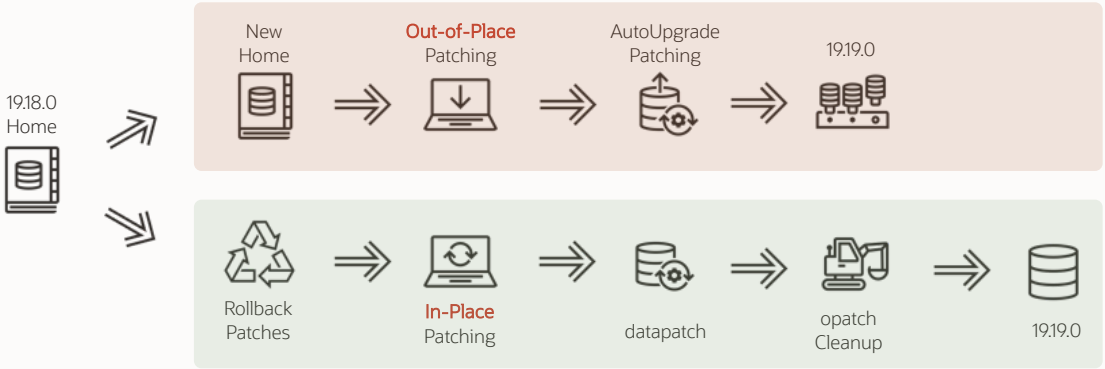
# Always patch Out-of-Place

- Don't argue with us ☺

# You don't believe it?

Experience it in our brand new Patch Me If You Can lab

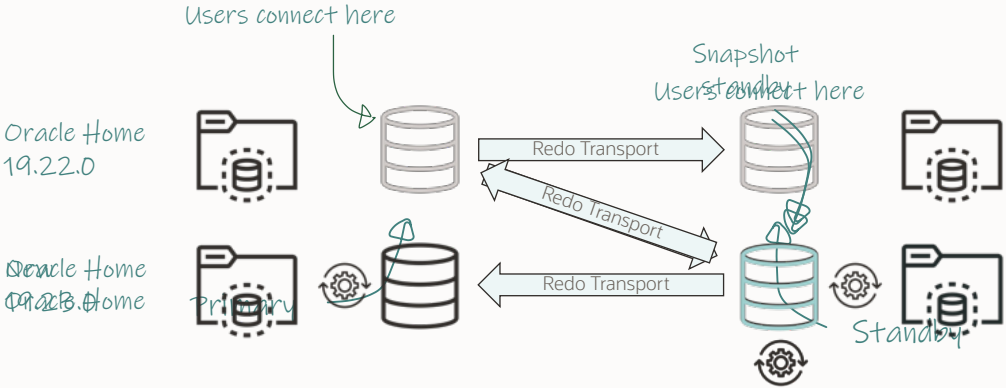
- https://apexapps.oracle.com/pls/apex/dbpm/r/livelabs/view-workshop?wid=3740



# Reduce downtime to the time it takes to perform a switchover

- Data Guard Standby-First Patch Apply (Doc ID 1265700.1)

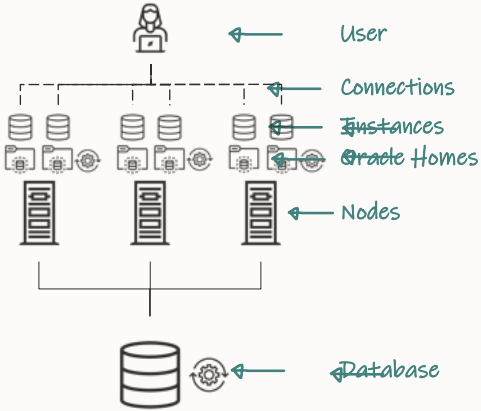
# Standby-First Patching




```
[oracle]$ $ORACLE_HOME/OPatch/datapatch -verbose
```

# Avoid database downtime with RAC Rolling Patch Apply

# RAC Rolling Patching




- New Oracle Home
- Patch Oracle Home
- Move to new Oracle Home
- Execute datapatch

# Release updates are **always**:

Standby-First installable

RAC Rolling installable

# Grid Infrastructure Patching Methods

**1** In-place

Replaces existing Oracle Home

Uses `opatchauto`

**2** Out-of-place

Creates a new Oracle Home

Uses `opatchauto` or `gridSetup`

# Grid Infrastructure Patching Methods

1 In-place

Replaces existing Oracle Home

Uses `opatchauto`

2 Out-of-place

Creates a new Oracle Home

Uses **`opatchauto`** or **`gridSetup`**

# We made upgrading easy.
# Now we make patching just as easy.

AutoUpgrade functionality extended to patching

```
$ cat DB19.cfg

patch1.source_home=/u01/app/oracle/product/19/dbhome_19_22_0
patch1.target_home=/u01/app/oracle/product/19/dbhome_19_23_0
patch1.sid=DB19


$ java -jar autoupgrade.jar -config DB19.cfg -mode deploy
```




# Fleet Patching

## AutoUpgrade

Automate your patching process and benefit from the familiar AutoUpgrade

## Fleet Patching and Provisioning

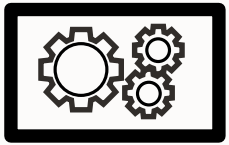
Go fleet scale with FPP and benefit from additional functionality like deployment of Oracle Home

# What about automation?

Fleet Patching and Provisioning

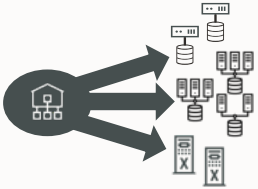
Out of place patching pioneer since 12.1

# Fleet Patching and Provisioning (FPP) – Overview



Automated software mgmt engine for Oracle deployments


Gold image based out-of-place software maintenance



Allows for centralized lifecycle management

# How to make use of FPP

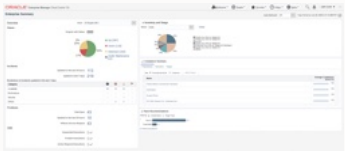
## Command line

```
>
```

## Rest API Calls

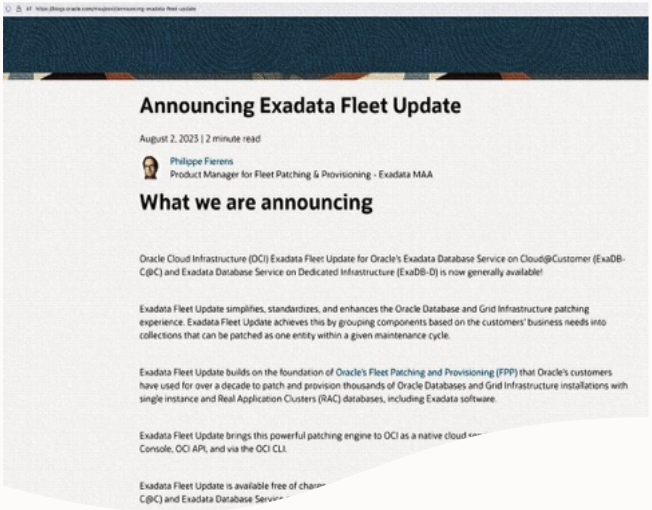
```
{ "xxx":
  { ....}
}, ...
```

## Using Enterprise Manager*



* Available since Oracle Enterprise Manager 13c Release 5 Update 14 (13.5.0.14)

# Available on-Premises and Oracle Cloud



## Announcing Exadata Fleet Update

August 2, 2023 | 2 minute read

Philippe Fierens
Product Manager for Fleet Patching & Provisioning - Exadata MAA

### What we are announcing

Oracle Cloud Infrastructure (OCI) Exadata Fleet Update for Oracle's Exadata Database Service on Cloud@Customer (ExaDB-C@C) and Exadata Database Service on Dedicated Infrastructure (ExaDB-D) is now generally available!

Exadata Fleet Update simplifies, standardizes, and enhances the Oracle Database and Grid Infrastructure patching experience. Exadata Fleet Update achieves this by grouping components based on the customers' business needs into collections that can be patched as one entity within a given maintenance cycle.

Exadata Fleet Update builds on the foundation of Oracle's Fleet Patching and Provisioning (FPP) that Oracle's customers have used for over a decade to patch and provision thousands of Oracle Databases and Grid Infrastructure installations with single instance and Real Application Clusters (RAC) databases, including Exadata software.

Exadata Fleet Update brings this powerful patching engine to OCI as a native cloud
Console, OCI API, and via the OCI CLI.

Exadata Fleet Update is available free of
C@C) and Exadata Database

Please checkout our blogs :

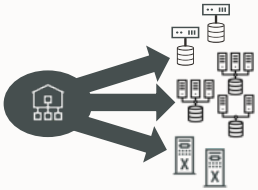
https://blogs.oracle.com/maa/post/announcing-exadata-fleet-update

https://blogs.oracle.com/maa/post/exadata-fleet-update-concepts

# FPP Flavours

FPP Lite

FPP

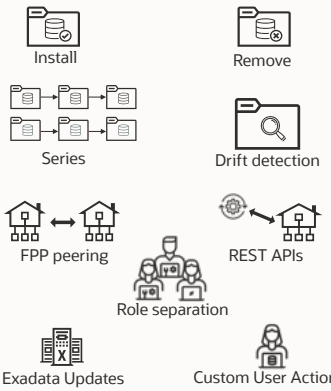


Start small
DB and GI patching in local cluster
Little configuration needed
Custom user scripts possible
Resumable actions

Complete Lifecycle Management
Full functionality
Rich feature set
Centralized Management
Centralized Image repository

# Lifecycle management of the Oracle Database Stack

## Rich feature set

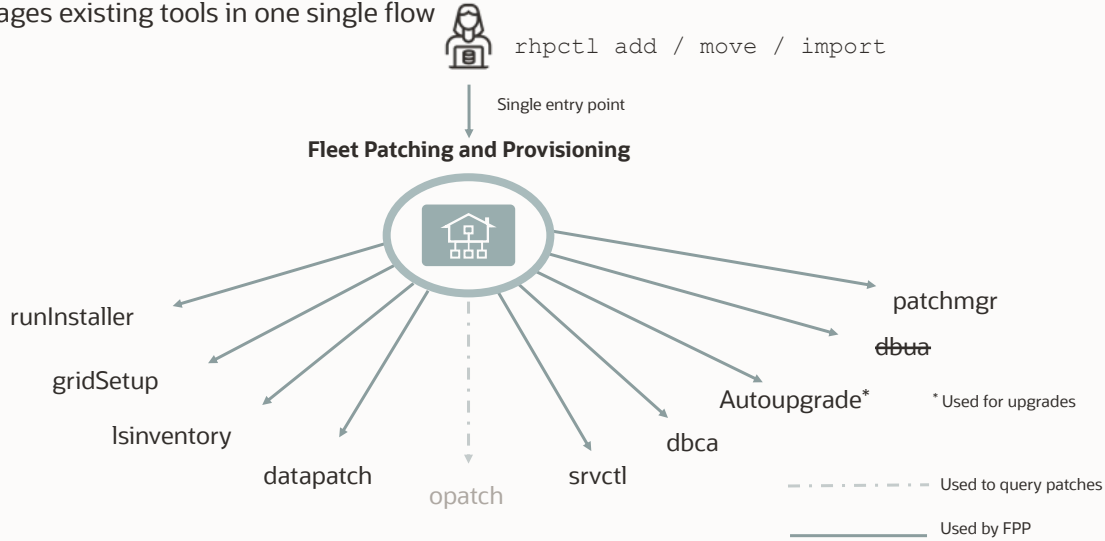



## Oracle Database (SI, RAC, RACONE)


## Oracle Grid Infrastructure


# Resolving complexity

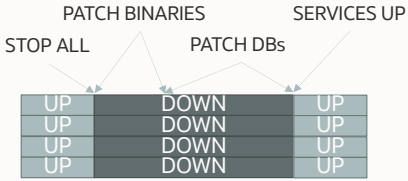
Leverages existing tools in one single flow



# FPP uses out-of-place patching

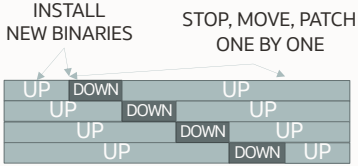
Leading the way to standardization and rolling patching

**In-place patching:**

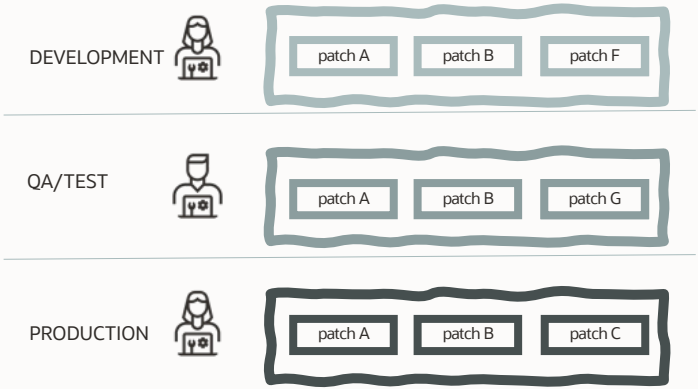



**Out-of-place patching:**

**ORACLE RECOMMENDED**

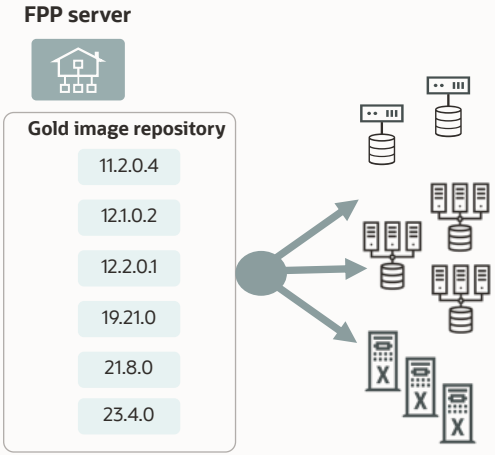


# Standardization is key



# Lifecycle management using gold images

Create once use many times in an automated way




Create and import the gold image **once**

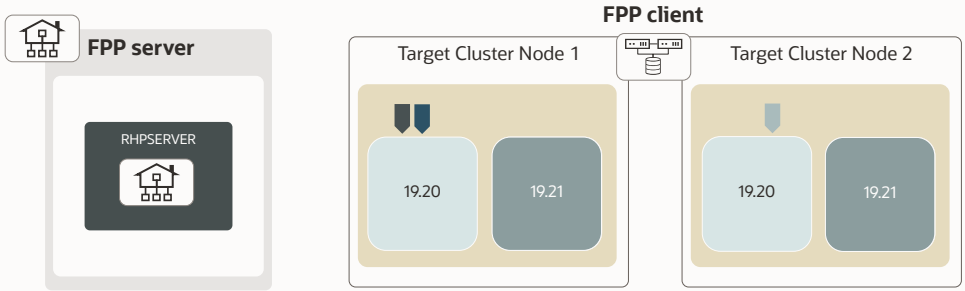
Deploy **many** times across the fleet

**Centrally** in an **automated** fashion

# Workflow

# FPP in practice

Rolling patching to new database home

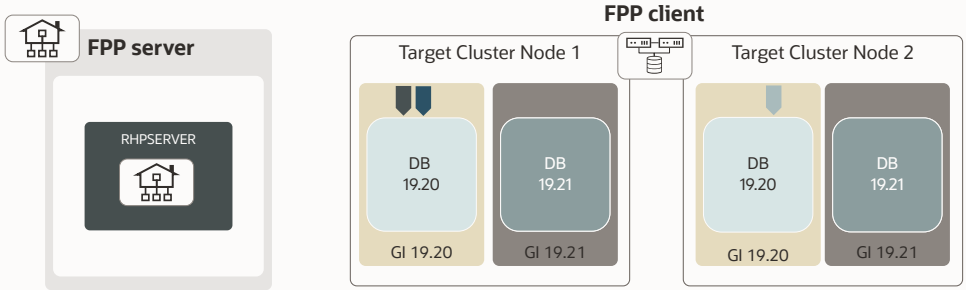



```
rhpctl move database \
  -sourcewc WC_db192000_cl1 \
  -patchedwc WC_db192100_cl1 \
  -drain_timeout 600
```

- Rolling by default
- Automated datapatch execution
- Service Drain Timeout honored

# FPP in practice

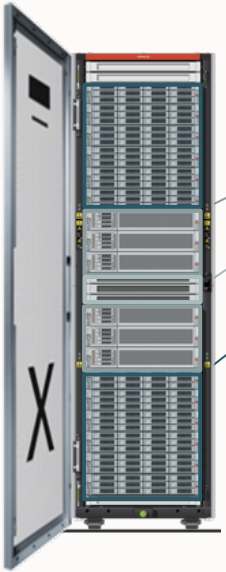
## Vertical Patching




```
rhpctl move gihome -destwc WC_GI_1921_cl1 \
-sourcewc WC_GI_1920_cl1 -auto \
-dbhomes WC_DB_1920_cl1=WC_DB_1921_cl1 \
-drain_timeout 600
```

- Compute OS + GI patching possible on Exadata

# Exadata Software Patching



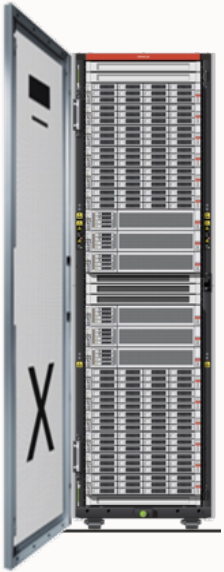
Exadata software patching :

- DB Nodes, Dom0, KVMHost, DomU, KVMGuest
- Network Switches (IB,RoCE)
- Storage Servers

- Vertical Patching : DB Node + GI Patching – with a single bounce of Grid Infrastructure and Database

*Please use FPP Server version 19.17 or later*

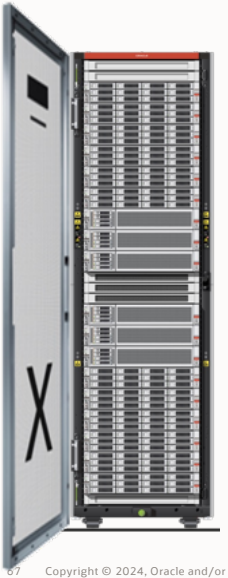
# Exadata Software Patching Flow



- Check 888828.1 and download the necessary binaries, always download the latest patchmgr (patch 21634633 )

- Import the binaries into FPP
- Use rhp commands to :
  - Apply the Exadata Update
  - Update GI and DB
  - Combine Compute Node + GI update

# Importing Exadata Images

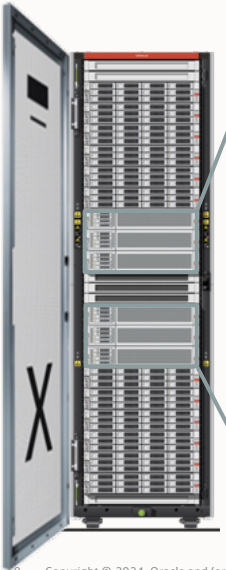


Copy zip images related to the component you want to patch separate directory and import, `patchmgr` is bundled with IB and RoCE switches and Cell Storage Servers it needs to be downloaded separately compute nodes

```
mkdir –p /u01/app/staging/21_2_18/BM_DOMU
cp p34694885_212000_Linux-x86-64.zip /u01/app/staging/21_2_18/BM_DOMU
cp p21634633_221300_Linux-x86-64.zip /u01/app/staging/21_2_18/BM_DOMU

[root@scaj0802bda03vm002 BM_DOMU]# unzip -l p34694885_212000_Linux-x86-64.zip
Archive:  p34694885_212000_Linux-x86-64.zip
  Length      Date    Time    Name
---------  ---------- -----   ----
1574918144  11-11-2022 18:49   exadata_ol7_base_repo_21.2.18.0.0.221111.1.iso
   824113  11-16-2022 20:18   README.html
---------                     -------
1575742257                     2 files
```

```
rhpctl import image -image imgname  -imagetype EXAPATCHSOFTWARE
  -version 21.2.18.0.0.221111.1 -path /u01/app/staging/21_2_18/BM_DOMU
```

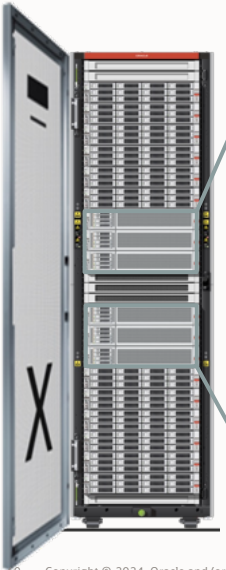
# Compute Node Patching with FPP from FPP client



```
rhpctl deploy image -image imgname -client cluster-c3
  -path /u01/app/staging/21_2_16/BM_DOMU

rhpctl update exadata -dbnodes "nodelist"
  -image imgname -iso_repo iso_name.zip
  [-batches "nodelist"] -client cluster-c3 [-patchmgrloc patchmgrloc]
  [-patchmgrargs "-ignore_alerts"] -eval

rhpctl update exadata -dbnodes "nodelist"
  -image imgname -iso_repo iso_name.zip
  [-batches "nodelist"] -client cluster-c3 [-patchmgrloc patchmgrloc]
  [-patchmgrargs "-ignore_alerts" ]-backup

rhpctl update exadata -dbnodes "nodelist"
  -image imgname -iso_repo iso_name.zip
  [-batches "nodelist"] -client cluster-c3 [-patchmgrloc patchmgrloc]
  [-patchmgrargs "-nobackup -ignore_alerts"]

ssh equivalence needed :
root@RHPC -> root@computenodes
```

# Compute Node Patching with FPP from FPP server (both virtual/BM)

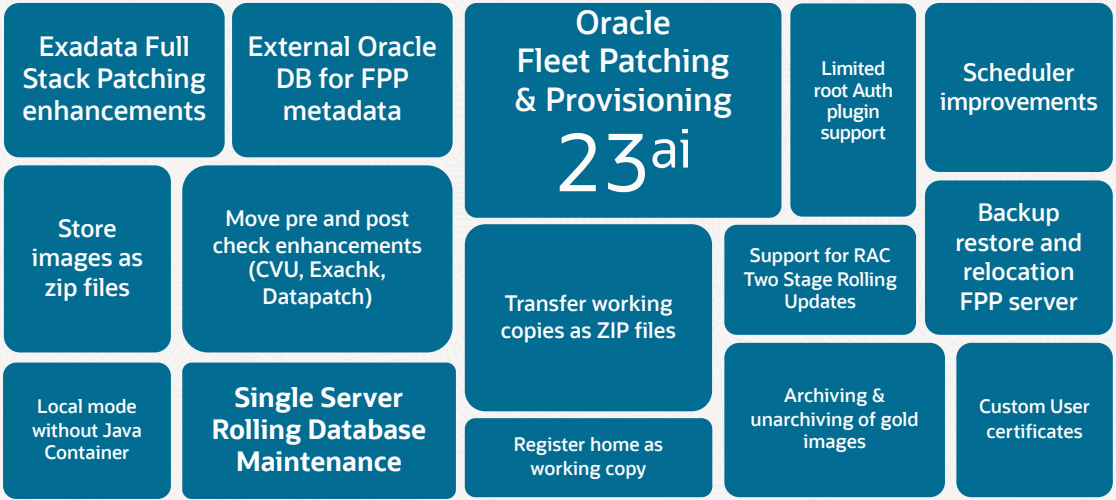
New In 23ai



```
rhpctl update exadata -dbnodes "nodelist"
-image imgname -iso_repo iso_name.zip
  [-batches "nodelist"] –server
  [-patchmgrloc patchmgrloc]
  [-patchmgrargs "-ignore_alerts"] -eval

rhpctl update exadata -dbnodes "nodelist"
-image imgname -iso_repo iso_name.zip
  [-batches "nodelist"] –server
  [-patchmgrloc patchmgrloc]
  [-patchmgrargs "-ignore_alerts"] -backup

rhpctl update exadata -dbnodes "nodelist"
-image imgname -iso_repo iso_name.zip
  [-batches "nodelist" -server
  [-patchmgrargs "-nobackup -ignore_alerts"]

ssh equivalence needed :
root@RHPS -> root@computenodes
```

# What's New in Oracle FPP 23ai

New In 23ai



# Licensing

Targets need to be licensed with either :

- Oracle RAC or RAC One Node licenses
- Oracle Database Lifecycle Management Pack for Single Instances

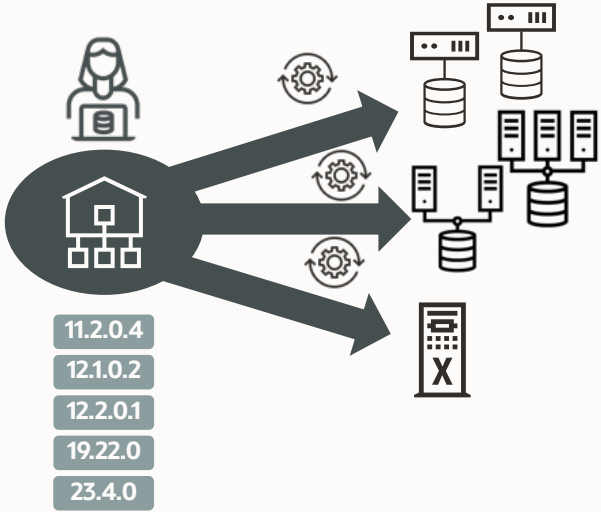
When using FPP through Enterprise Manager Oracle Database Lifecycle Management Pack is needed for all targets.

# Fleet Patching & Provisioning

23ai

## Patch Simple

- Fleet Patching & Provisioning (FPP) offers repeatable standardized out-of-place patching automation at scale for the Oracle Database
- Fleet Patching & Provisioning provides features such as :
  - Gold image-based drift detection
  - Integrated job scheduling
  - User actions for extensibility
  - Comprehensive Exadata Patching
- Always adheres to the latest MAA best practices
- Oracle Database 23ai simplifies and enhances FPP to leverage the latest RAC features and provides full stack Exadata patching enhancements



# Additional information

Oracle fleet patching and provisioning landing page
https://www.oracle.com/goto/fpp

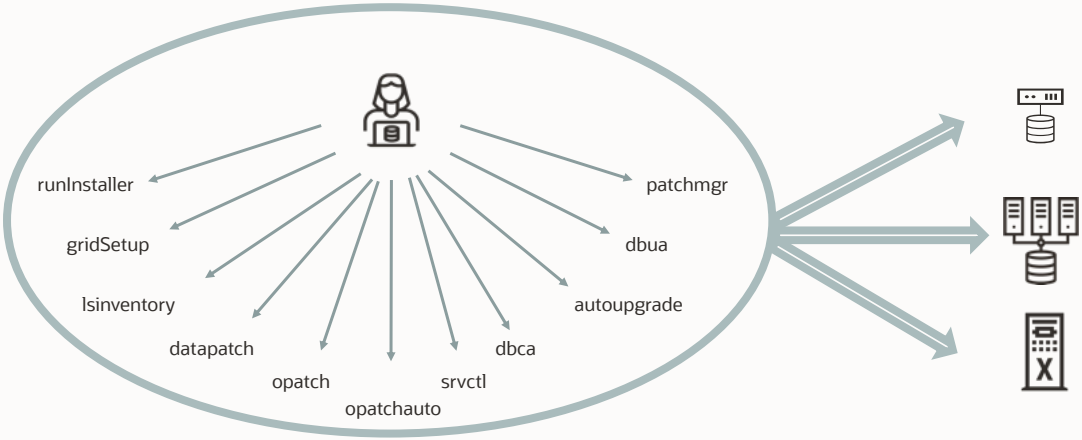
Fleet patching and provisioning and maintenance 19c documentation
https://docs.oracle.com/en/database/oracle/oracle-database/19/fppad/fleet-patching-provisioning.html

FPP by Example Blog Series
https://blogs.oracle.com/maa/post/fleet-patching-provisioning-by-example-intro



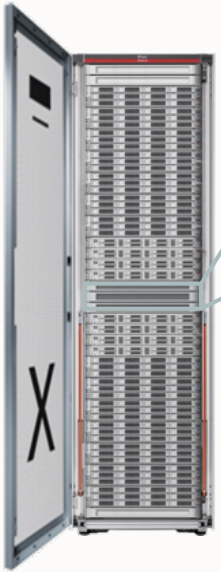

# Thank You

# Maintenance updates require interaction with a lot of tools




Lots of different
utilities/commands needed

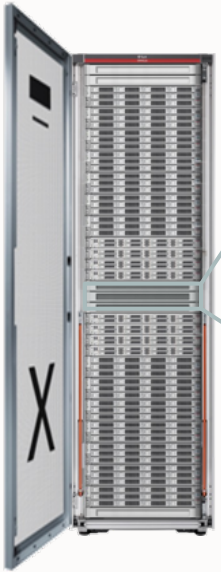
# Infiniband switch Patching with FPP



Two scenario’s

- virtualized
- non-virtualized

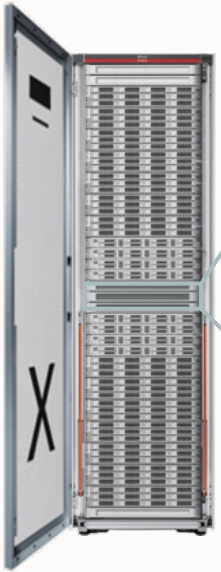
# Infiniband Switch (Baremetal) Patching from FPP Client



```
rhpctl deploy image -image imgname -client cluster-c3
  -path /u01/app/staging/deploy_ibswitch_21216

rhpctl update exadata –ibswitches "switchlist"
  -image -client cluster-c3
  -fromnode "clusternode" -eval

rhpctl update exadata –ibswitches "switchlist"
  -image imgname -client cluster-c3
  -fromnode "clusternode" -eval

ssh equivalence need:
root@clusternode -> root@IBSwitches
```

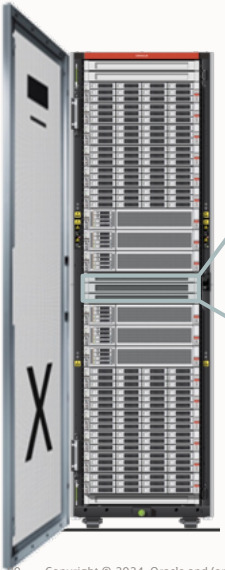
# Infiniband Switch (domU) Patching from FPP Server

New In 23ai



```
rhpctl import image -image imgname -imagetype EXAPATCHSOFTWARE
  -version 21.2.16.0.0.220914
  -path /u01/app/staging/exa_ibswitch_21216


rhpctl update exadata –ibswitches "switchlist"
  -image imgname –server –patchmgrdrivingsystem "dom0node"
  -fromnode "FPP Server Node" -eval

rhpctl update exadata –ibswitches "switchlist"
  -image imgname –server –patchmgrdrivingsystem "dom0node"

ssh equivalence needed :
root@RHPS -> root@patchmgr_driving_node (dom0) -> root@IBSwitches
```

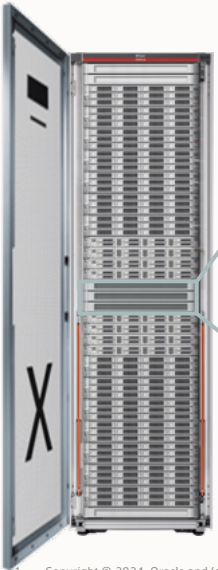
# RoCE Switch Patching from FPP Client



```
rhpctl deploy image -image imgname -client cluster-c3
  -path /u01/app/staging/deploy_roceswitch_21216

rhpctl update exadata –roceswitches "switchlist"
  -image -client cluster-c3
  -fromnode "clusternode" -eval

rhpctl update exadata –roceswitches "switchlist"
  -image imgname -client cluster-c3
  -fromnode "clusternode"

ssh equivalence needed :
root@clusternode -> root@RoCESwitches
```

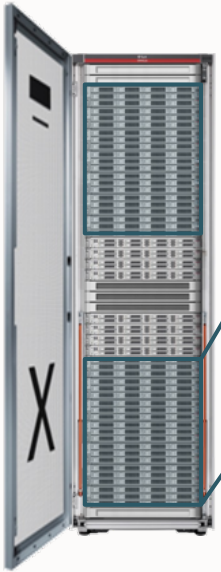
# RoCE Switch Patching from FPP Server

New In 23ai



```
rhpctl import image -image imgname -imagetype EXAPATCHSOFTWARE
  -version 21.2.16.0.0.220914
  -path /u01/app/staging/exa_ibswitch_21216


rhpctl update exadata –roceswitches "switchlist"
  -image imgname –server
  -eval

rhpctl update exadata –roceswitches "switchlist"
  -image imgname –server

ssh equivalence needed :
root@RHPS -> root@RoCESwitches
```

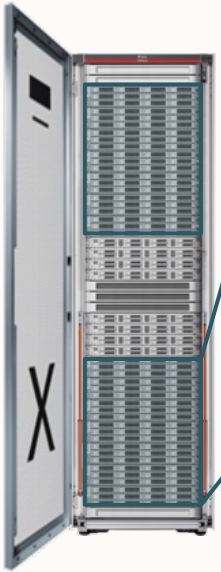
# Exadata Software Patching with FPP



Storage Cell patching, current status:

- Driving node
  - Compute node
  - FPP server
- Only rolling patching

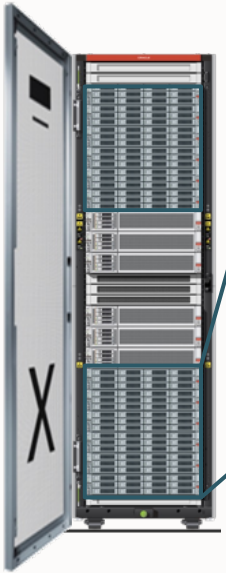
# Storage Server Software Patching from FPP Client



```
rhpctl deploy image -image imgname
  -client cluster-c3 -path /u01/app/staging/deploy_cellimage_21216

rhpctl update exadata -cells -image imgname -client cluster-c3
  [-patchmgrargs "-ignore_alerts"]
  [-batches "celllist"] -eval

rhpctl update exadata -cells -image imgname -client cluster-c3
  [-patchmgrargs "-ignore_alerts"]
  [-batches "celllist"]

Ssh equivalence need :
root@RHPC -> root@cells
```

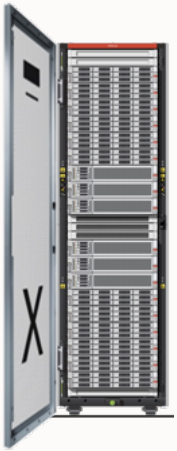
# Storage Server Software Patching from FPP Server

New In 23ai



```
rhpctl update exadata -cells -image imgname
  -server
    [-patchmgrargs "-ignore_alerts"]
  -eval

rhpctl update exadata -cells -image imgname
   -server
   [-patchmgrargs "-ignore_alerts"]

Ssh equivalence need :
root@RHPS -> root@cells
```

# Combined Exadata Software Patching/Update

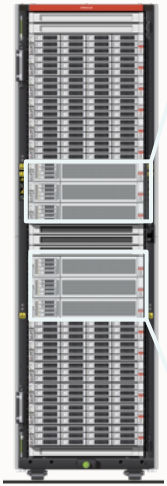


| Patch/Update Type | 12cR1 | 12cR2 | 18c | 19c | 21c | 23ai |
|---|---|---|---|---|---|---|
| DB | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| GI | | ✓ | ✓ | ✓ | ✓ | ✓ |
| DomU | | | ✓ | ✓ | ✓ | ✓ |
| Dom0/ KVMHost | | | | ✓ | ✓ | ✓ |
| RoCE Switches | | | | ✓ | ✓ | ✓ |
| Storage servers | | | ✓ | ✓ | ✓ | ✓ |
| IB Switches | | | ✓ | ✓ | ✓ | ✓ |

Interleaved GI+DB

Interleaved DomU+GI

# Combined Compute + GI patching



```
rhpctl add workingcopy –image imgname –workingcopy wcname
  -path path –oraclebase oraclebase –storagetype LOCAL
  -softwareonly -client cluster-c3

rhpctl deploy image -image imgname -client cluster-c3
  -path /u01/app/staging/21_2_16/BM_DOMU

rhpctl move gihome -destwc wcname
 -sourcewc wcname -image imgname
 -iso_repo iso_name.zip
 -patchmgrloc patchmgrLoc
 [-batches "nodelist"]  [-patchmgrargs "-ignore_alerts"] -eval

rhpctl move gihome -destwc wcname
 -sourcewc wcname -image imgname
 -iso_repo iso_name.zip
 -patchmgrloc patchmgrLoc
 [-batches "nodelist"]  [-patchmgrargs "-ignore_alerts"]

ssh equivalence need :
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```

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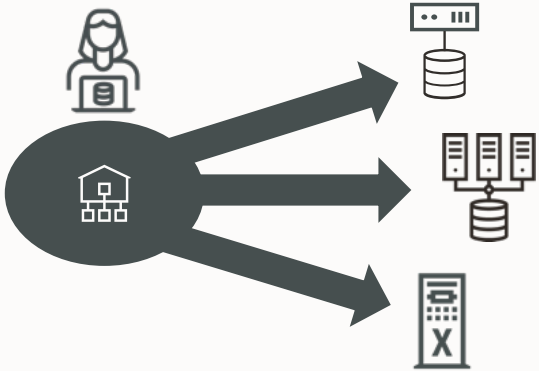

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