PATCHING LIKE A HERO

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COMPANY: EPROSEED

MICHIGAN ORACLE USERS SUMMIT 2020

MONDAY OCTOBER 26 – THURSDAY OCTOBER 29, 2020
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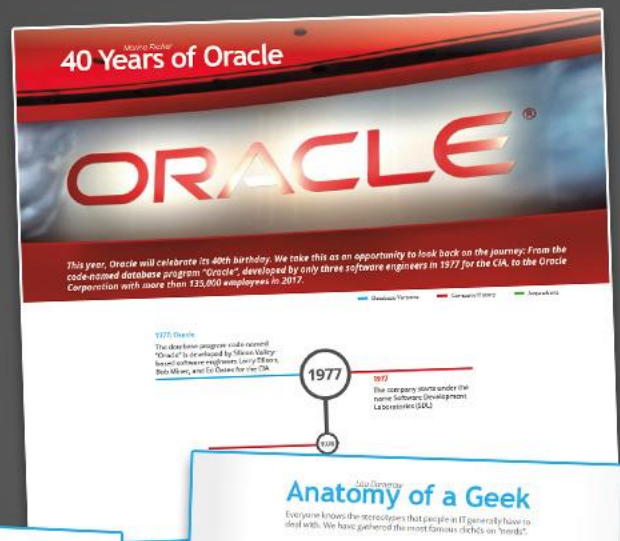
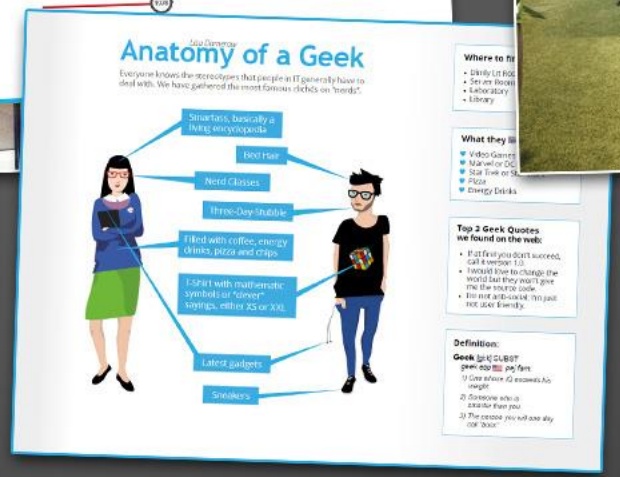
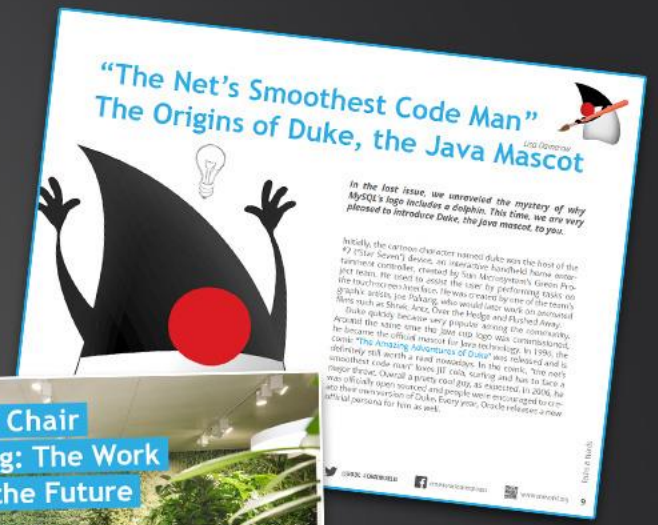
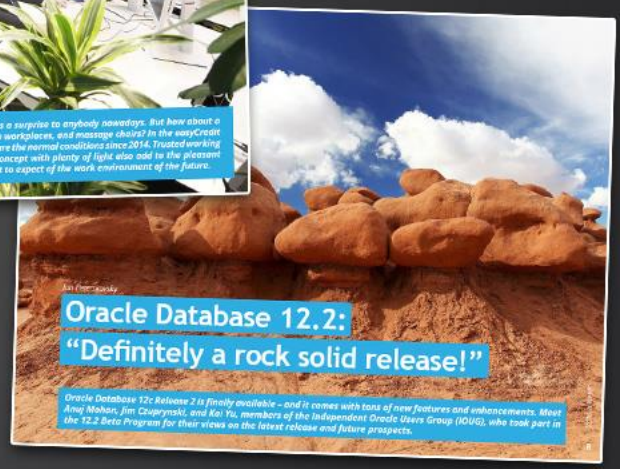
Previous Highlights









ORAWORLD

e-Magazine for Oracle Users published by the EOUC

AGENDA

Planning

Applying

Checking

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PLANNING

WHY PATCH IS SO IMPORTANT?

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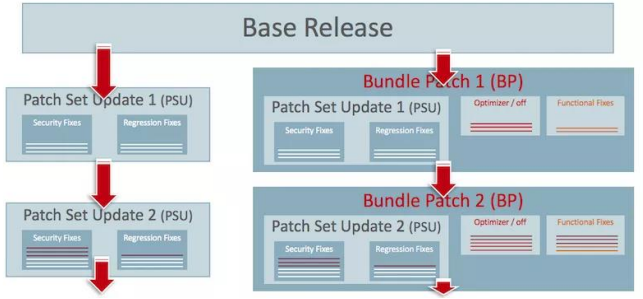
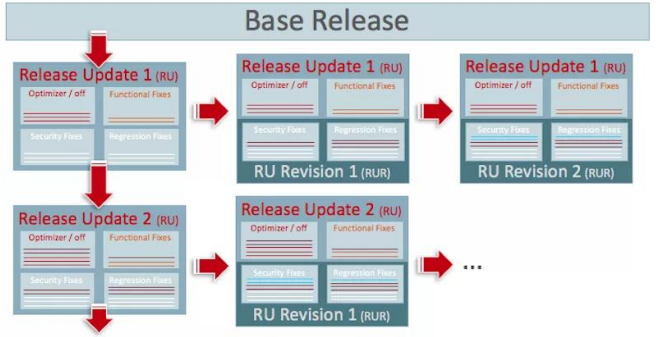
WHY PATCH IS SO IMPORTANT?

- PSU – Patch Set Updates
- BP – Proactive Bundle Patches





>= 12cR2

- RU – Release Update

Production	April	July	October
18.1.0	18.2.0	18.3.0	18.4.0

Stay with Updates (RU) instead.

Makes your life much easier.

–Mike

- RUR – Release Update Revision

	July	October	January	April	July	October
RU	18.3.0					
RUR-1		18.3.1				
RUR-2			18.3.2	18.4.2	18.5.2	18.6.2

- https://mikedietrichde.com/2017/10/24/differences-psu-bp-ru-rur/
- https://mikedietrichde.com/2018/11/08/why-release-update-revisions-rur-are-tricky/

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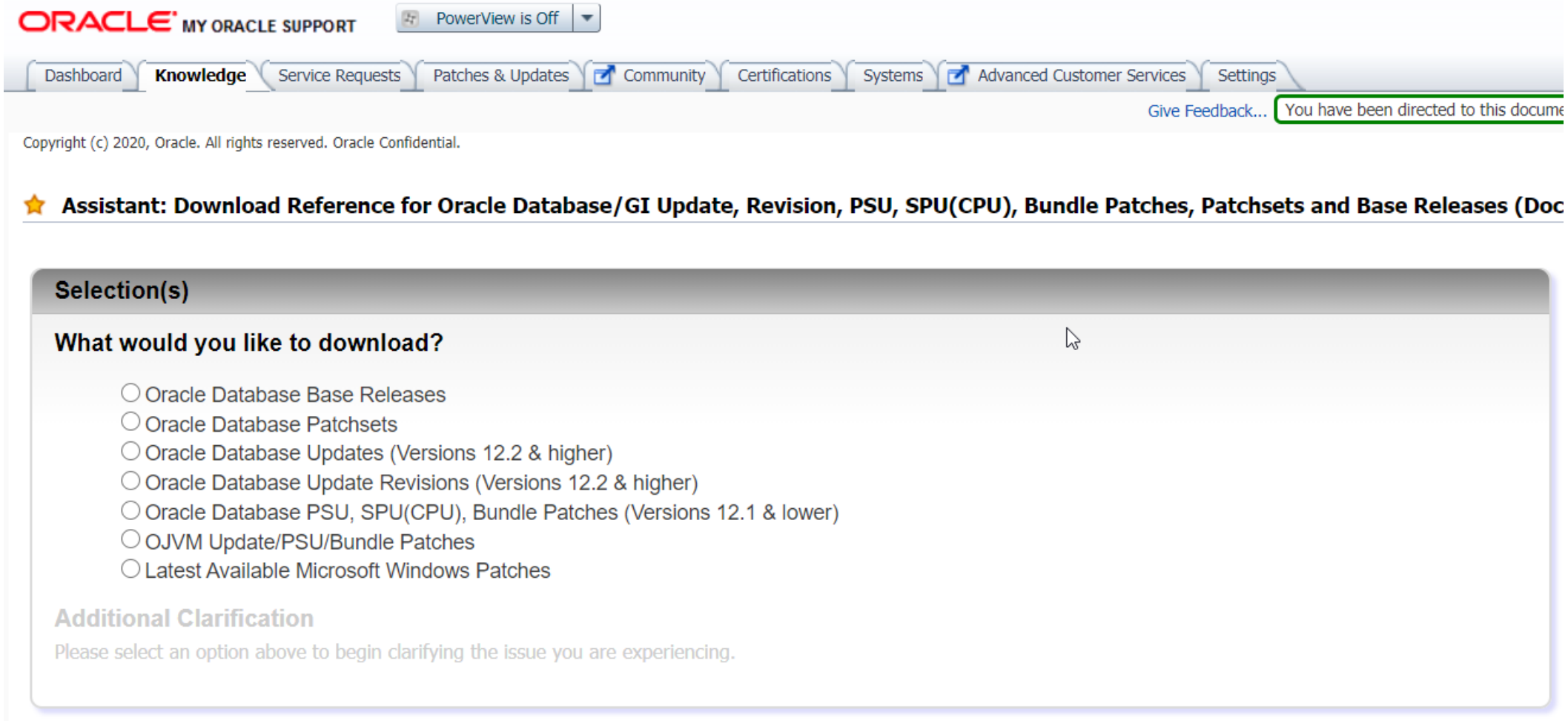
PATCH DOWNLOAD ASSISTANT - DOC ID 2118136.2



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PATCH DOWNLOAD ASSISTANT - DOC ID 2118136.2

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

Selection(s)

What would you like to download?

> Oracle Database Updates (Versions 12.2 & higher) [Change]

Please select the version:

> 19.0.0.0 [Change]

Related Information

19.0.0.0

Description	Database Update	GI Update	Windows Bundle Pa
APR2020 (19.7.0.0.0)	30869156	30899722	30901317
JAN2020 (19.6.0.0.0)	30557433	30501910	30445947
OCT2019 (19.5.0.0.0)	30125133	30116789	30151705
JUL2019 (19.4.0.0.0)	29834717	29708769	NA
APR2019 (19.3.0.0.0)	29517242	29517302	NA

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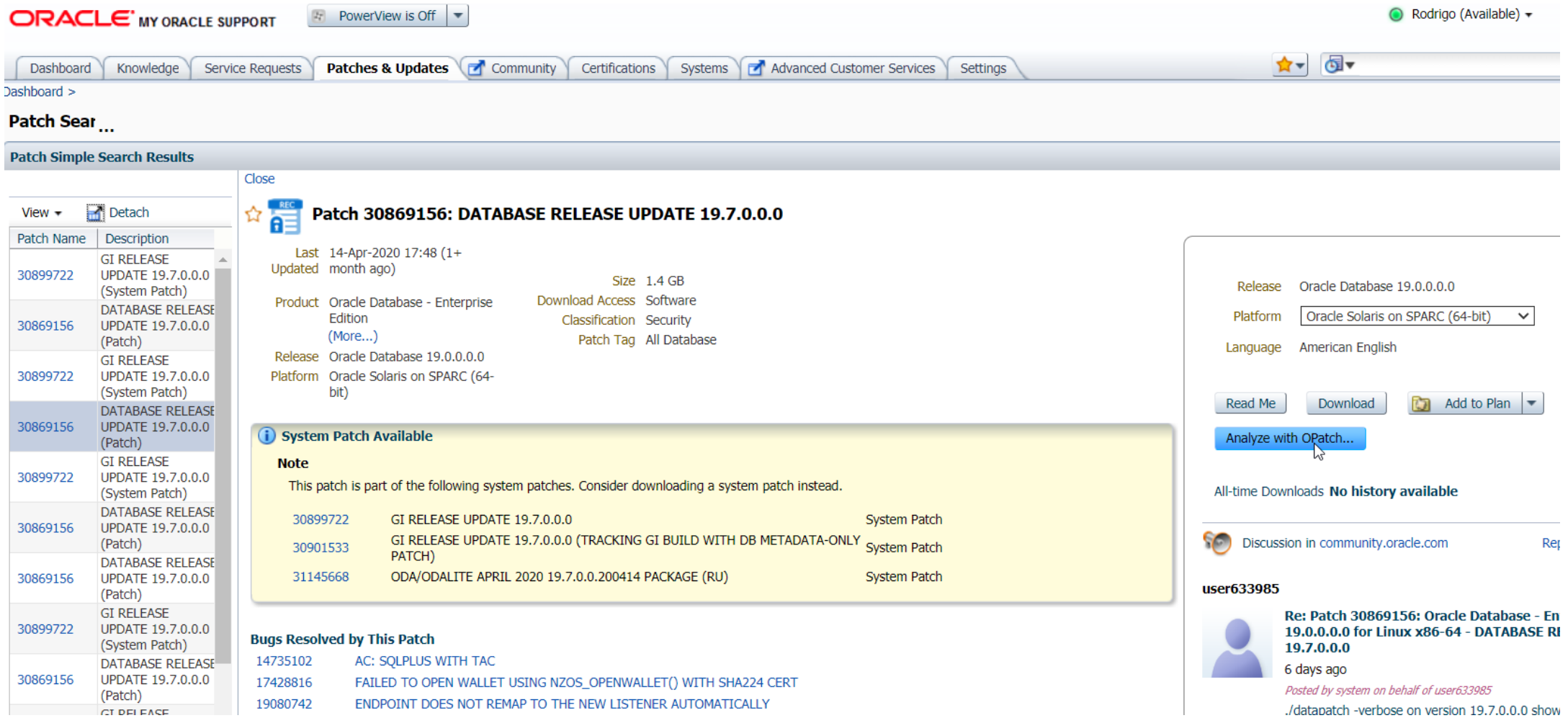
PATCH CONFLICT ANALYZER



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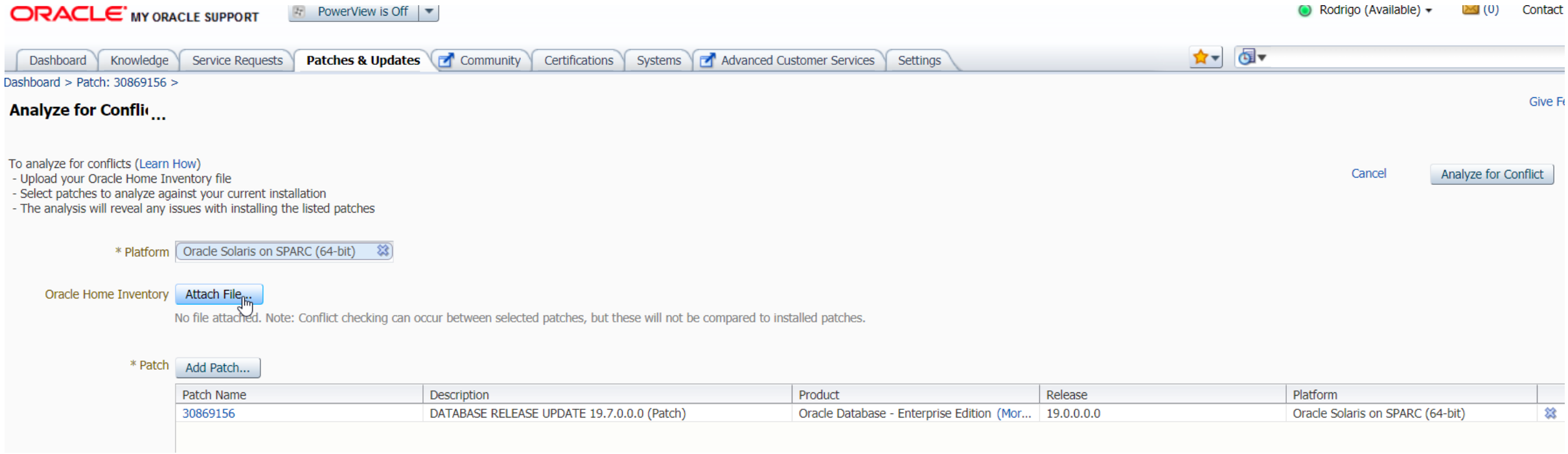
PATCH CONFLICT ANALYZER



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PATCH READ ME

Patch 30869156 - Database Release Update 19.7.0.0.200414

Oracle® Database

Patch 30869156 - Database Release Update 19.7.0.0.200414

This document is accurate at the time of release. For any changes and additional information regarding Database Release Update 19.7.0.0.200414, see these related docu

- Document 2633816.1 *Oracle Database 19c RU/RUR Apr 2020 Known Issues*

This document includes the following sections:

- Section 1, "Patch Information"
- Section 2, "Prerequisites"
- Section 3, "Installation"
- Section 4, "Deinstallation"
- Section 5, "Known Issues"
- Section 6, "References"
- Section 7, "Bugs Fixed by This Patch"
- Section 8, "Documentation Accessibility"

1 Patch Information

Database Release Update 19.7.0.0.200414 patches are cumulative. That is, the content of all previous Database bundles is included in the latest Database bundle patch.

To install the Database Release Update 19.7.0.0.200414 patch, the Oracle home must have Oracle Database release 19c installed.

This patch is Oracle RAC Rolling Installable.

This patch is Database Vault installable. Review My Oracle Support Document 1195205.1 for details on how to apply this patch to a Database Vault environment.

This patch is Data Guard Standby-First Installable. See My Oracle Support Document 1265700.1 *Oracle Patch Assurance - Data Guard Standby-First Patch Apply* for deta

For the latest Update with Security Fixes that should be used on Client-Only installations, please refer to the Critical Patch Update (CPU) Program Patch Availability Docum

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PATCH READ ME

2. Verify the structure of the contents of the Combo Patch. The top-level directory contains this README document and some sub-directories in the following layout:

```
29251992
|
|- README.txt
|
|- README.html
|
|- 29301682/
|       --README.html
|       -- <other files and directories>
|
|- 29249584/
|       --README.html
|       -- <other files and directories>
|
NOTE:  To review the READMEs for the component patches, click on the component patch number, then click Read Me.
```

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IMPORTANT MOS NOTES

Doc ID 756671.1 Master Note for Database Proactive Patch Program

Doc ID 2285040.1 Release Update Introduction and FAQ

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

Doc ID 2521164.1 Database 19c Proactive Patch Information

Doc ID 2420120.1 18c : Datapatch New Features And Changes from 12.1

Doc ID 1265700.1 Oracle Patch Assurance - Data Guard Standby-First Patch Apply

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BACKUP OF ORACLE HOME

```
[root@o19c]# cd /u01/app/oracle/product/19.0.0/db_1
[root@o19c]# tar -cf /tmp/backupOH140620.tar .
```

https://mufalani.wordpress.com/2019/06/13/backing-up-and-restoring-your-oracle-home/

Note id 1493677.1

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CLONING AN ORACLE HOME

```
[root@o19c]# cd /u01/app/oracle/product/19.0.0/

[root@o19c]# mkdir db_2 && chown -R oracle.oinstall db_2

[root@o19c]# chmod -R 775 db_2

[root@o19c]# cd /u01/app/oracle/product/19.0.0/db_2

[root@o19c]# tar -xf /tmp/backupOH140620.tar
```

https://mufalani.wordpress.com/2020/03/03/saving-your-time-cloning-a-patched-oh-oracle-home-to-another-machine/

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CLONING AN ORACLE HOME

```
[oracle@o19c]$ export ORACLE_HOME=
/u01/app/oracle/product/19.0.0/db_2

[oracle@o19c]$ cd $ORACLE_HOME/clone/bin

$ORACLE_HOME/perl/bin/perl clone.pl \
ORACLE_BASE="/u01/app/oracle/" \
ORACLE_HOME="/u01/app/oracle/product/19.0.0/db_2" \
OSDBA_GROUP=oinstall OSOPER_GROUP=dba \
OSBACKUPDBA_GROUP=oinstall OSRACDBA_GROUP=oinstall \
ORACLE_HOME_NAME="Db_home19700"
```

https://mufalani.wordpress.com/2020/03/03/saving-your-time-cloning-a-patched-oh-oracle-home-to-another-machine/

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RESTORE OF ORACLE HOME

```
[root@o19c]# cd /u01/app/oracle/product/19.0.0/
[root@o19c]# mv db_1 db_1_damaged_bad

[root@o19c]# mkdir db_1 && chown -R oracle.install
[root@o19c]# chmod -R 775 db_1

[root@o19c]# cd /u01/app/oracle/product/19.0.0/db_1
[root@o19c]# tar -xf /tmp/backupOH140620.tar
```

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RESTORE OF ORACLE HOME

```
[oracle@o19c]$ cd $ORACLE_HOME/bin
[oracle@o19c]$ relink all

[oracle@o19c]$ cd $ORACLE_HOME/install
[oracle@o19c]$ grep -i "Code 1|Fatal|Error" relink_2020-06-14_*.log
```

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TIPS AND TRICKS

Check Inventory

Check opatch required version

Backup OH

Clone OH

Relink OH

Check the OS version of the patch

Read the entire readme file of the patch

Don’t use NFS to store patch or backups

Check free memory because of the unzip step

Check PATH

Check space

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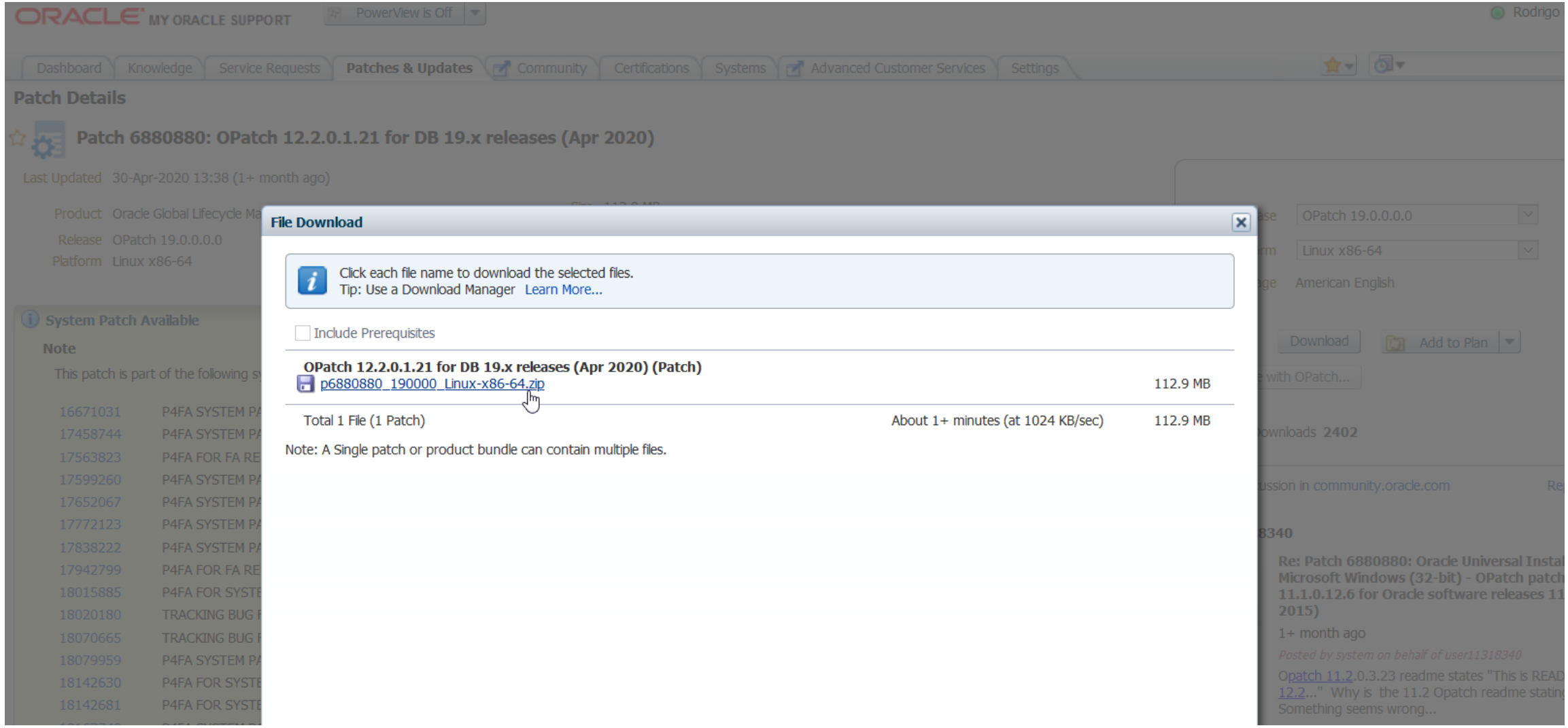
PATCHING OPATCH UTILITY - 6880880



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PATCHING OPATCH UTILITY - 6880880

```
[oracle@o19c ~]$ cd $ORACLE_HOME
[oracle@o19c ~]$ mv OPatch OPatch.14062020
[oracle@o19c ~]$ unzip -qa /tmp/p6880880_190000_Linux-x86-64.zip
```

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TIPS AND TRICKS

More about opatch prereqs options? **(Doc ID 459360.1)**

```
[oracle@o19c]$ ./opatch prereq CheckSystemSpace -phBaseDir
/tmp/30869156
```

```
[oracle@o19c]$ ./opatch prereq CheckConflictAgainstOHWithDetail -
phBaseDir /tmp/29301682/29301631
```

```
[oracle@o19c]$ ./opatch prereq CheckConflictAgainstOHWithDetail -
phBaseDir /tmp/29301682/29302264
```

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TIPS AND TRICKS

```
[oracle@o19c]$ ORACLE_HOME/.patch_storage/NApply/<TIMESTAMP>
restore.sh
make.txt
```

Can we delete $ORACLE_HOME/.patch_storage Directory? (**Doc ID 403218.1**)

opatch util cleanup (**Doc ID 550522.1**)

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TIPS AND TRICKS

```
[oracle@ora18c3 ~]$ cd $ORACLE_HOME/OPatch
[oracle@ora18c3 OPatch]$
[oracle@ora18c3 OPatch]$ ./opatch util cleanup
Oracle Interim Patch Installer version 12.2.0.1.14
Copyright (c) 2019, Oracle Corporation.  All rights reserved.


Oracle Home       : /u01/app/oracle/product/18.0.0/db_1
Central Inventory : /u01/app/oraInventory
   from           : /u01/app/oracle/product/18.0.0/db_1/oraInst.loc
OPatch version    : 12.2.0.1.14
OUI version       : 12.2.0.4.0
Log file location : /u01/app/oracle/product/18.0.0/db_1/cfgtoollogs/opatch/opatch2019-07-02_17-47-31PM_1.log

Invoking utility "cleanup"
OPatch will clean up 'restore.sh,make.txt' files and 'scratch,backup' directories.
You will be still able to rollback patches after this cleanup.
Do you want to proceed? [y|n]
y
User Responded with: Y

Backup area for restore has been cleaned up. For a complete list of files/directories
deleted, Please refer log file.

OPatch succeeded.
[oracle@ora18c3 OPatch]$
```

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TIPS AND TRICKS

```
[oracle@srvoral-]$ opatch apply

Oracle Interim Patch Installer version 11.2.0.3.21
Copyright (c) 2019, Oracle Corporation.  All rights reserved.


Oracle Home       : /u01/app/oracle/product/11.2.0.4/db_1
Central Inventory : /u01/app/oraInventory
   from           : /u01/app/oracle/product/11.2.0.4/db_1/oraInst.loc
OPatch version    : 11.2.0.3.21
OUI version       : 11.2.0.4.0
Log file location : /u01/app/oracle/product/11.2.0.4/db_1/cfgtoollogs/opatch/opatch2017-05-17_16-16-45PM_1.log

Verifying environment and performing prerequisite checks...
OPatch continues with these patches:   17805316

Do you want to proceed? [y|n]
Could not recognize input. Please re-enter.
y
User Responded with: Y
All checks passed.
Provide your email address to be informed of security issues, install and
initiate Oracle Configuration Manager. Easier for you if you use your My
Oracle Support Email address/User Name.
Visit http://www.oracle.com/support/policies.html for details.
Email address/User Name:

You have not provided an email address for notification of security issues.
Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]:  Y



Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = '/u01/app/oracle/product/11.2.0.4/db_1')


Is the local system ready for patching? [y|n]
y
User Responded with: Y
Backing up files...
Applying interim patch '17805316' to OH '/u01/app/oracle/product/11.2.0.4/db_1'

Patching component oracle.rdbms, 11.2.0.4.0...
Make failed to invoke "/usr/bin/make -f ins_rdbms.mk ioracle ORACLE_HOME=/u01/app/oracle/product/11.2.0.4/db_1"....'/u01/app/oracle/product/11
/u01/app/oracle/product/11.2.0.4/db_1/lib//libhasgen11.so: undefined reference to `ztpk_Verify'
/u01/app/oracle/product/11.2.0.4/db_1/lib//libhasgen11.so: undefined reference to `ztpk_DestroyKey'
/u01/app/oracle/product/11.2.0.4/db_1/lib//libhasgen11.so: undefined reference to `ztpk_Sign'
collect2: ld returned 1 exit status
make: *** [/u01/app/oracle/product/11.2.0.4/db_1/rdbms/lib/oracle] Error 1
'

The following make actions have failed :

Re-link fails on target "ioracle".


Do you want to proceed? [y|n]
n
User Responded with: N
```

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TIPS AND TRICKS

```
Restoring "/u01/app/oracle/product/11.2.0.4/db_1" to the state prior to running NApply...
Checking if OPatch needs to invoke 'make' to restore some binaries...
Make failed to invoke "/usr/bin/make -f ins_rdbms.mk ioracle ORACLE_HOME=/u01/app/oracle/product/11.2.0.4/db_1"....'/u01/app/oracle/product/11.2.0.
/u01/app/oracle/product/11.2.0.4/db_1/lib//libhasgen11.so: undefined reference to `ztpk_Verify'
/u01/app/oracle/product/11.2.0.4/db_1/lib//libhasgen11.so: undefined reference to `ztpk_DestroyKey'
/u01/app/oracle/product/11.2.0.4/db_1/lib//libhasgen11.so: undefined reference to `ztpk_Sign'
collect2: ld returned 1 exit status
make: *** [/u01/app/oracle/product/11.2.0.4/db_1/rdbms/lib/oracle] Error 1
'


--------------------------------------------------------------------------------
Failed to run make commands. Please contact Oracle Support.
OPatch failed to restore OH '/u01/app/oracle/product/11.2.0.4/db_1'. Consult OPatch document to restore the home manually before proceeding.

NApply was not able to restore the home.  Please invoke the following scripts:
  - restore.[sh,bat]
  - make.txt (Unix only)
to restore the ORACLE_HOME.  They are located under
"/u01/app/oracle/product/11.2.0.4/db_1/.patch_storage/NApply/2017-05-17_16-16-45PM"

UtilSession failed: Re-link fails on target "ioracle".

Log file location: /u01/app/oracle/product/11.2.0.4/db_1/cfgtoollogs/opatch/opatch2017-05-17_16-16-45PM_1.log

OPatch failed with error code 73
```

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TIPS AND TRICKS

To solve this:

I restored the damaged lib file, copying it from my backup to $ORACLE_HOME/lib

Then, I issued a relink

$ORACLE_HOME/bin/relink all

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PATCHING ORACLE HOME

```
[oracle@ora19c ~]$ export PATH=$PATH:/usr/ccs/bin

[oracle@ora19c ~]$ export
ORACLE_HOME=/oracle/app/oracle/product/19.0.0/db_2

[oracle@ora19c ~]$ export
PATH=$ORACLE_HOME/bin:$ORACLE_HOME/OPatch:$PATH
```

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PATCHING ORACLE HOME

```
[oracle@ora19c ~]$ cd /tmp/patches
[oracle@ora19c ~]$ unzip -qa p30869156_190000_Linux-x86-64.zip
[oracle@ora19c ~]$ cd 30869156/
```

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PATCHING ORACLE HOME

[oracle@o19c]$ opatch prereq CheckConflictAgainstOHWithDetail -ph ./

```
[oracle@o19c]$ opatch prereq CheckConflictAgainstOHWithDetail -ph ./
Oracle Interim Patch Installer version 12.2.0.1.19
Copyright (c) 2020, Oracle Corporation. All rights reserved.

PREREQ session

Oracle Home       : /u01/app/oracle/product/19.0.0/db_2
Central Inventory : /u01/app/oraInventory
   from           : /u01/app/oracle/product/19.0.0/oraInst.loc
   OPatch version    : 12.2.0.1.19
   OUI version       : 12.2.0.7.0
   Log file location : /u01/app/oracle/product/19.0.0/db_2/cfgtoollogs/opatch/opatch2020-04-16_12-15-35PM_1.log

   Invoking prereq "checkconflictagainstohwithdetail"

   Prereq "checkConflictAgainstOHWithDetail" passed.

   OPatch succeeded.
```

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PATCHING ORACLE HOME

```
[oracle@o19c]$ cd /tmp/patches/30869156/
[oracle@o19c]$ opatch apply
```

```
[oracle@ora19c]$ opatch apply

Oracle Interim Patch Installer version 12.2.0.1.19
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Oracle Home : /u01/app/oracle/product/19.0.0.0/db_2
Central Inventory : /u01/app/oraInventory
from : /u01/app/oracle/product/19.0.0/db_2/oraInst.loc
OPatch version : 12.2.0.1.19
OUI version : 12.2.0.7.0
Log file location : /u01/app/oracle/product/19.0.0/db_2/cfgtoollogs/opatch/opatch2020-04-16_12-16-33PM_1.log

Verifying environment and performing prerequisite checks…
OPatch continues with these patches: 30869156

Do you want to proceed? [y|n]
y
User Responded with: Y
All checks passed.
```

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PATCHING ORACLE HOME

```
Please shutdown Oracle instances running out of this ORACLE_HOME on the local system.
(Oracle Home = '/u01/app/oracle/product/19.0.0/db_2')

Is the local system ready for patching? [y|n]
y
User Responded with: Y
Backing up files…
Applying interim patch '30869156' to OH '/u01/app/oracle/product/19.0.0/db_2'

ApplySession: Optional component(s) [ oracle.network.gsm, 19.0.0.0.0 ] , [ oracle.rdbms.ic, 19.0.0.0.0 ] , [ oracle.tfa, 19.0.0.0.0 ] , [ oracle.orac
.0 ] , [ oracle.rdbms.tg4db2, 19.0.0.0.0 ] , [ oracle.options.olap.awm, 19.0.0.0.0 ] , [ oracle.sqlj, 19.0.0.0.0 ] , [ oracle.net.cman, 19.0.0.0.0 ]
.cman, 19.0.0.0.0 ] , [ oracle.assistants.asm, 19.0.0.0.0 ] , [ oracle.options.olap, 19.0.0.0.0 ] , [ oracle.xdk.parser.java.jaxb2, 19.0.0.0.0 ] , [
usm, 19.0.0.0.0 ] , [ oracle.jdk, 1.8.0.191.0 ] not present in the Oracle Home or a higher version is found.

Patching component oracle.rdbms.rsf, 19.0.0.0.0…

Patching component oracle.rdbms, 19.0.0.0.0…

Patching component oracle.rdbms.util, 19.0.0.0.0…

Patching component oracle.assistants.acf, 19.0.0.0.0…

Patching component oracle.assistants.deconfig, 19.0.0.0.0…

Patching component oracle.assistants.server, 19.0.0.0.0…

Patching component oracle.buildtools.rsf, 19.0.0.0.0…

Patching component oracle.ctx, 19.0.0.0.0…
```

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PATCHING ORACLE HOME

```
Patching component oracle.perlint, 5.28.1.0.0…

Patching component oracle.precomp.lang, 19.0.0.0.0…

Patching component oracle.jdk, 1.8.0.201.0…

Patch 30869156 successfully applied.

Sub-set patch [30446054] has become inactive due to the
application of a super-set patch [30869156].
Please refer to Doc ID 2161861.1 for any possible further required actions.
Log file location: /u01/app/oracle/product/19.0.0/db_2/cfgtoollogs/opatch/opatch2020-04-16_12-16-33PM_1.log

OPatch succeeded.
```

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DATA DICTIONARY PATCHES (SQL)

datapatch is online

Datapatch is smart (automatically rollback)

Old days

@catbundle.sql PSU|CPU|EXA apply

$ORACLE_HOME/cfgtools/catbundle/

Note id 605795.1

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DATA DICTIONARY PATCHES (SQL)

```
[oracle@o19c ~]$ cd $ORACLE_HOME/OPatch
[oracle@o19c ~]$ ./datapatch -verbose
SQL Patching tool version 19.7.0.0.0 Production on Thu Apr 16 12:24:35 2020
Copyright (c) 2012, 2020, Oracle. All rights reserved.

Log file for this invocation: /u01/app/oracle/cfgtoollogs/sqlpatch/sqlpatch_3469_2020_04_16_12_24_35/sqlpatch_invocation.log

Connecting to database…OK
Gathering database info…done
Bootstrapping registry and package to current versions…done
Determining current state…done

Current state of interim SQL patches:
No interim patches found
Current state of release update SQL patches:
Binary registry:
19.7.0.0.0 Release_Update 200327015544: Installed
SQL registry:
Applied 19.5.1.0.0 Release_Update_Revision 191217104520 successfully on 11-MAR-20 11.37.46.444300 AM

Adding patches to installation queue and performing prereq checks…done
Installation queue:
No interim patches need to be rolled back
Patch 30446054 (Database Release Update Revision : 19.5.1.0.200114 (30446054)):
Rollback from 19.5.1.0.0 Release_Update_Revision 191217104520 to 19.5.0.0.0 Release_Update 190914101502
Patch 30869156 (Database Release Update : 19.7.0.0.200414 (30869156)):
Apply from 19.5.0.0.0 Release_Update 190914101502 to 19.7.0.0.0 Release_Update 200327015544
No interim patches need to be applied

Installing patches…
Patch installation complete. Total patches installed: 2

Validating logfiles…done
Patch 30446054 rollback: SUCCESS
logfile: /u01/app/oracle/cfgtoollogs/sqlpatch/30446054/23301848/30446054_rollback_ITTS00_2020Apr16_12_26_02.log (no errors)
Patch 30869156 apply: SUCCESS
logfile: /u01/app/oracle/cfgtoollogs/sqlpatch/30869156/23495480/30869156_apply_ITTS00_2020Apr16_12_26_21.log (no errors)
SQL Patching tool complete on Thu Apr 16 12:31:05 2020
```

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SOLVING CONFLICTS

```
[oracle@o19c]$ opatch rollback -id 8702869
```

Sometimes you need to request a merge to Oracle support manually open a SR or automatically by Conflict Analyze Tool online.

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PATCHING GRID INFRA BEFORE TO INSTALL

```
cd  /u01/app/grid/product/12201
unzip /tmp/linuxx64_12201_grid_home.zip

mkdir /tmp/patches
cd /tmp/patches

unzip /tmp/p26133434_122010_Linux-x86-64-GI.zip -d /tmp/patches/
```

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PATCHING GRID INFRA BEFORE TO INSTALL

```
cd /u01/app/grid/product/12201

./gridSetup.sh -silent -applyOneOffs /tmp/patches/26133434/25586399/
./gridSetup.sh -silent -applyOneOffs /tmp/patches/26133434/26002778/
./gridSetup.sh -silent -applyOneOffs /tmp/patches/26133434/26123830/

./gridSetup.sh
```

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PATCHING OEMCC

```
export ORACLE_HOME=/u01/oem/middleware


cd /u01/

tar cf - oem | gzip >
/nfsbak/backup_system/OEMCC13c_bkp_19062019.tar.gz
```

Obs.: You can ignore the errors during backup of... $OH/network/log/cgisock.22741192 is not a valid tar file type.

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PATCHING OEMCC

```
export ORACLE_HOME=/u01/oem/middleware
export omspatcher=/u01/oem/middleware/OMSPatcher/omspatcher
cd /u01/oracle/patch/OMS
unzip p6880880_139000_Generic.zip
$ORACLE_HOME/bin/emctl stop oms
```

-- You can find java under agent home

```
/u01/oem/agent/agent_13.2.0.0.0/jdk/bin/java -jar
/u01/oracle/patch/OMS/6880880/opatch_generic.jar -silent
oracle_home=/u01/oem/middleware
```

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PATCHING OEMCC

```
export ORACLE_HOME=/u01/oem/middleware

export omspatcher=/u01/oem/middleware/OMSPatcher/omspatcher


cd /u01/oracle/patch/OMS

mv $ORACLE_HOME/OMSPatcher $ORACLE_HOME/OMSPatcher.bkp190619

unzip -qa -d $ORACLE_HOME/
/u01/oracle/patch/OMS/p19999993_132000_Generic.zip


$ORACLE_HOME/OMSPatcher/omspatcher version


$ORACLE_HOME/bin/emctl start oms
```

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PATCHING OEMCC

```
export ORACLE_HOME=/u01/oem/middleware

export omspatcher=/u01/oem/middleware/OMSPatcher/omspatcher

$ORACLE_HOME/OMSPatcher/wlskeys/createkeys.sh -oh $ORACLE_HOME -
location /u01/oracle/patch/OMS/


username: weblogic

password: MYorclTST12c


vi /u01/oracle/patch/OMS/property.txt

AdminServerURL=t3s://mysrvoem:7101

AdminConfigFile=/u01/oracle/patch/OMS/config

AdminKeyFile=/u01/oracle/patch/OMS/key
```

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PATCHING OEMCC

```
cd /u01/oracle/patch/OMS/

unzip -qa p29762588_132000_Generic.zip


cd /u01/oracle/patch/OMS/29762588/


$omspatcher apply /u01/oracle/patch/OMS/29762588/ -analyze -
invPtrLoc /u01/oem/middleware/oraInst.loc
OMSPatcher.OMS_DISABLE_HOST_CHECK=true -property_file
/u01/oracle/patch/OMS/property.txt
```

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PATCHING OEMCC

```
export ORACLE_HOME=/u01/oem/middleware

export omspatcher=/u01/oem/middleware/OMSPatcher/omspatcher


$ORACLE_HOME/bin/emctl stop oms


$omspatcher apply /u01/oracle/patch/OMS/29762588/ -invPtrLoc
/u01/oem/middleware/oraInst.loc
OMSPatcher.OMS_DISABLE_HOST_CHECK=true -property_file
/u01/oracle/patch/OMS/property.txt


$ORACLE_HOME/bin/emctl start oms

$ORACLE_HOME/OPatch/opatch lspatches
```

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CHECKING

PATCHING ORACLE HOME

```
[oracle@o19c ~]$ opatch lspatches
30805684;OJVM RELEASE UPDATE: 19.7.0.0.200414 (30805684)
30869156;Database Release Update : 19.7.0.0.200414 (30869156)
29585399;OCW RELEASE UPDATE 19.3.0.0.0 (29585399)

OPatch succeeded.
```

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CHECKING INVENTORY

Expanded

$ORACLE_HOME/OPatch/opatch lsinvetory

Sumarized

$ORACLE_HOME/OPatch/opatch lspatches

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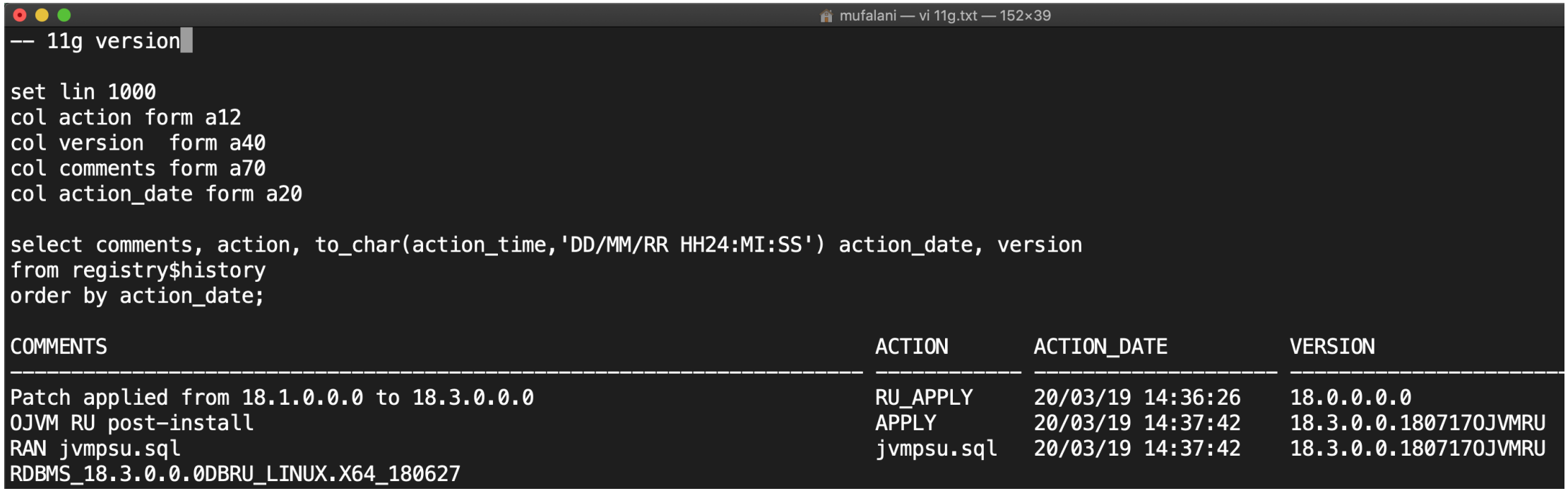
CHECKING APPLIED PATCHES



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CHECKING APPLIED PATCHES

```
SQL> set lin 1000
SQL> col action form a12
SQL> col version form a40
SQL> col description form a85
SQL> col action_date form a20
SQL> select description, action, to_char(action_time,'DD/MM/RR HH24:MI:SS') action_date from dba_registry_sqlpatch;

DESCRIPTION                                                    ACTION             ACTION_DATE
-------------------------------------------------------------------------------------------------------------
Database Release Update Revision : 19.5.1.0.200114 (30446054) APPLY              11/03/20 11:37:46
Database Release Update Revision : 19.5.1.0.200114 (30446054) ROLLBACK           16/04/20 12:30:59
Database Release Update : 19.7.0.0.200414 (30869156)          APPLY              16/04/20 12:31:04
OJVM RELEASE UPDATE: 19.7.0.0.200414 (30805684)               APPLY              16/04/20 12:45:45
```

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CHECKING COMPONENTS

```
SQL> col comp_name form a50
SQL> col version form a30
SQL> col status form a20
SQL> select comp_name, status, version from dba_registry;

COMP_NAME                                          STATUS      VERSION
-------------------------------------------------- ----------- ------------------------------
Oracle Database Catalog Views                      VALID       19.0.0.0.0
Oracle Database Packages and Types                 VALID       19.0.0.0.0
JServer JAVA Virtual Machine                       VALID       19.0.0.0.0
Oracle XDK                                         VALID       19.0.0.0.0
Oracle Database Java Packages                      VALID       19.0.0.0.0
OLAP Analytic Workspace                            VALID       19.0.0.0.0
Oracle Real Application Clusters                   OPTION OFF  19.0.0.0.0
Oracle Workspace Manager                           VALID       19.0.0.0.0
Oracle Text                                        VALID       19.0.0.0.0
Oracle XML Database                                VALID       19.0.0.0.0
Oracle Multimedia                                  VALID       19.0.0.0.0
Spatial                                            VALID       19.0.0.0.0
Oracle OLAP API                                    VALID       19.0.0.0.0
Oracle Application Express                         VALID       3.2.1.00.12
```

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SAVE THE DATE

- OATUG Forum Live

  December 7-11, 2020

  Virtual Event

  https://forum.oatug.org

- MOUS 2021

  October 27, 2021

  Schoolcraft College - VisTaTech Center,

  18600 Haggerty Rd, Livonia, MI

THANK YOU

www.mous.us

SURVEYS

- Session Surveys

  Please complete the session survey for this session using the Zoom session survey link.

  The survey link will be provided via email once the webinar is closed.

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