Oracle Patching 19c

Links:

Oracle Metalink Website:

https://support.oracle.com/portal/

Critical Patch Updates, Security Alerts and Bulletins

https://www.oracle.com/in/security-alerts/

https://docs.oracle.com/en/engineered-systems/oracle-database-appliance/19.17/cmtrn/oda-patches.html#GUID-CE9A339E-595B-45DC-889B-AE2F7187D64F

Patching Overview practical document:

Patch_Apply.txt

Machine Compatibility

1. Install Oracle Virtual Machine
2. Install Oracle Linux OS 7.9
3. Install Oracle 19.3 Binaries
4. Download Oracle 19.15 RU Patch and OPatch utility software.
5. Minimum 13+ GB Space is required in /u01 filesystem.

Database Patching

Database Patching is done for fixing bugs and improving system performance. Patching co-managed (VMBD/BMDB/Exadata) databases are the responsibility of the user while applying patches to autonomous databases is done by the provider (Oracle).

1. Operating systems patches

2. Database Patching

3. Grid Infrastructure patching

4. Cloud tooling patching

5. Interim Patches

NOTE:

Interim patches are used to fix specific bugs for a particular customer.

These patches require a particular base release or patchset to be installed before they can be applied.

Introduction to OPatch

OPatch consists of patching utilities that help ensure your Oracle software stays current and secure.

The utilities are:

- ✓ **OPatch** → A Java-based utility that enables the application and rollback of patches to Oracle software.

- ✓ **OPatchauto**

- ✓ **OPatchauto –binary** → A patch application tool that applies a single patch on a selected Oracle home.
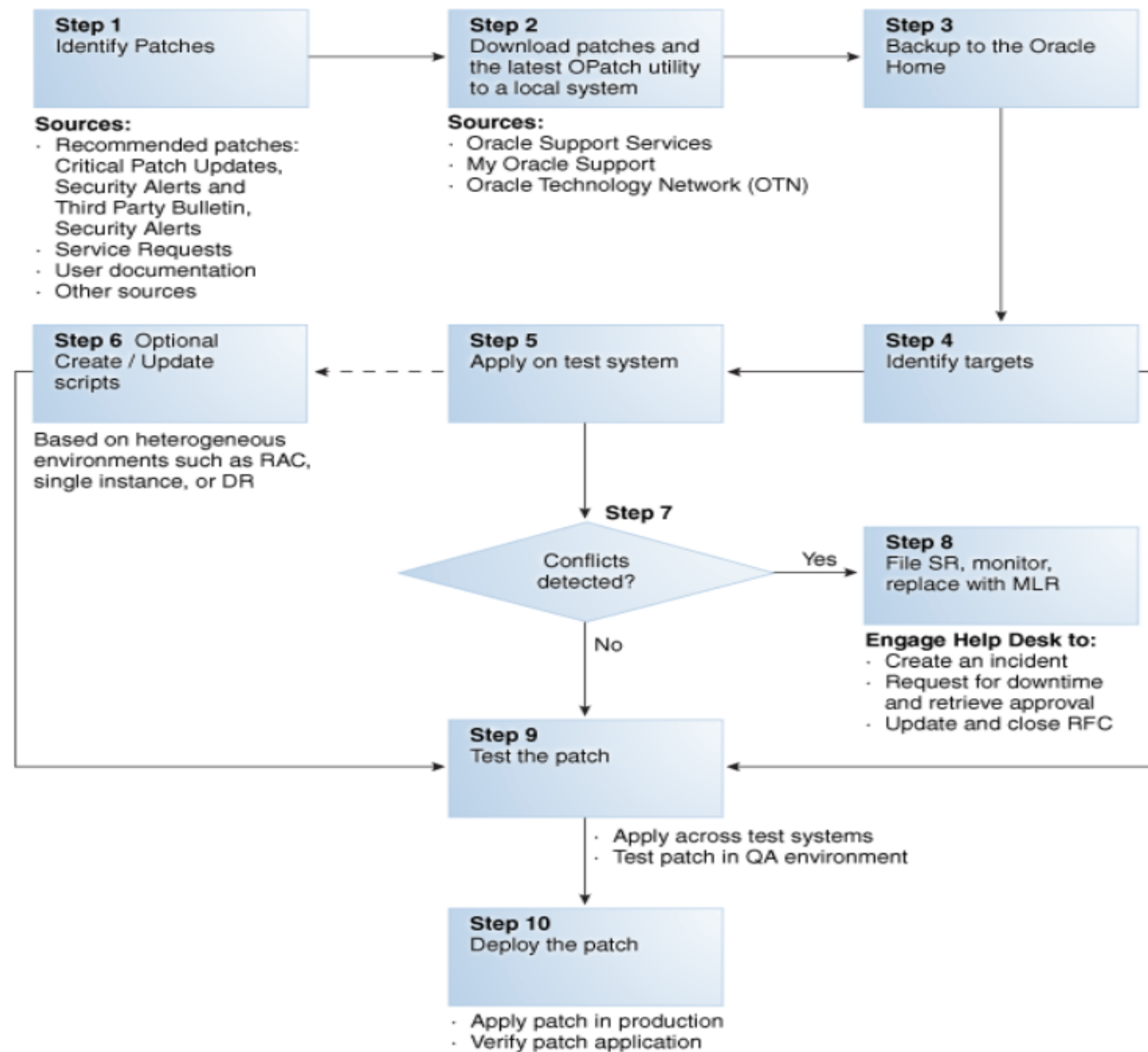
OPatchauto:

A patch orchestration tool that generates patching instructions specific to your target configuration and then uses OPatch to perform the patching operations without user intervention.

Specifically, OPatchAuto can:

✓Perform pre-patch checks.

✓Apply the patch

✓Start and stop the running servers.

✓Perform post-patch checks.

✓Roll back patches when patch deinstallation is required.

Overview of the Patch Process

Step 1
Identify Patches

Sources:
- Recommended patches: Critical Patch Updates, Security Alerts and Third Party Bulletin, Security Alerts
- Service Requests
- User documentation
- Other sources

Step 2
Download patches and the latest OPatch utility to a local system

Sources:
- Oracle Support Services
- My Oracle Support
- Oracle Technology Network (OTN)

Step 3
Backup to the Oracle Home

Step 6 Optional
Create / Update scripts

Based on heterogeneous environments such as RAC, single instance, or DR

Step 5
Apply on test system

Step 4
Identify targets

Step 7

Conflicts detected?

Yes

No

Step 8
File SR, monitor, replace with MLR

Engage Help Desk to:
- Create an incident
- Request for downtime and retrieve approval
- Update and close RFC

Step 9
Test the patch

- Apply across test systems
- Test patch in QA environment

Step 10
Deploy the patch

- Apply patch in production
- Verify patch application

Types of Oracle Patches

- **Interim patches** - contain a single bug fix or a collection of bug fixes provided as required

- **Interim patches for security bug fixes** - contain customer-specific security bug fixes

- **Diagnostic patches** - intended to help diagnose or verify a fix or a collection of bug fixes

- **Bundle Patch Updates (BPUs)** - a cumulative collection of fixes for a specific product or component

- **Patch Set Updates (PSUs)** - a cumulative collection of high impact, low risk, and proven fixes for a specific product or component and Security Patch Updates

- **Security Patch Updates (SPU)** - a cumulative collection of security bug fixes. SPUs were formerly known as Critical Patch Updates (CPU).

- **System Patch** - contains several sub-patches in a format that can be used by OPatchAuto.

- **Merge Label Request (MLR)** - a *merge* of two or more fixes. MLR creation requires a *label* for the new set of merged code and a Patch Set Exception

Access the OPatch Utilities

- OPatch - $ORACLE_HOME/OPatch/opatch

- OPatchAuto - $ORACLE_HOME/opatch/opatchauto

Important Commands

1. list inventory details of patch.

$ORACLE_HOME/OPatch/opatch lsinventory

2. list patchsets applied :

$ORACLE_HOME/OPatch/opatch lspatches

3. Find opatch version:

$ORACLE_HOME/OPatch/opatch version

Important Commands

4. Find details of a particular patch(before applying):

$ORACLE_HOME/OPatch/opatch query -all {PATCH_PATH}

$ORACLE_HOME/OPatch/opatch query -all /software/PSUPATCH/30089984

5. Apply a patch to RDBMS HOME:

-- You may need to shutdown the database and listener services:

cd /SOFTWARE/PSUPATCH/30089984 -- Go to the patch path:

$ORACLE_HOME/OPatch/opatch apply

Important Commands

6. Rollback an patch from RDBMS HOME:

$ORACLE_HOME/OPatch/opatch rollback -id [patch_id]

$ORACLE_HOME/OPatch/opatch rollback -id 30089984

7. Apply one off patch in grid_home:

root # $GI_HOME/crs/install/rootcrs.sh -prepatch.

oracle$ cd /SOFTWARE/PSUPATCH/30089984 -- Go to the patch path:

oracle$ $GRID_HOME/OPatch/opatch apply

root# $GI_HOME/crs/install/rootcrs.sh -postpatch

Important Commands

8. Check conflict against ORACLE_HOME

- go to patch folder.

cd 27734982

[27734982]$ $ORACLE_HOME/OPatch/opatch prereq CheckConflictAgainstOHWithDetail -ph ./

9.Check whether active executables are running:

- go to patch folder.

cd 27734982

[27734982]$ $ORACLE_HOME/OPatch/opatch prereq CheckActiveFilesAndExecutables -ph ./

Important Commands

10.Opatch command using different inventory location:

$ORACLE_HOME/OPatch/opatch lsinventory -invPtrLoc /etc/orainv/orainventory

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