

SPU / CPU Patch Apply through OEM Cloud Control 12c (Offline Mode)

Feb 2, 2014

By:

Raheel Syed
Oracle DBA

Blog: <http://raheeldba.wordpress.com>

LinkedIn: <http://in.linkedin.com/pub/raheel-hashmi-syed/33/34a/226>

Facebook: <http://www.facebook.com/raheelhashmi.syed>

Twitter: raheelhsyed

The document is a step-by-step guide to Patch Oracle database with SPU / CPU patch through OEM Cloud Control 12c in Offline Mode¹.

High Level:

- I. Download latest Opatch along with Metadata and SPU / CPU patch along with Metadata from MOS and copy it to Management Agent host (agent on OMS machine or target host)
- II. One Time task: Setting as Named Credentials for normal User (oracle) and setting as Named Credentials
Named User for Normal User (Oracle) is Oracle home owner credentials used for running jobs, patching etc
Named User for Privilege User (ROOT) is used for executing root scripts and SUDO privileges has to be explicitly granted
- III. Upload the PATCHES to SOFTWARE LIBRARY of cloud control as Super Administrator
- IV. Create Patch Plan
- V. Analyze, Prepare and Deploy the Patch Plan.

Step-by-Step:

- 1) Download the Opatch and CPU / SPU PATCHES from MOS.
- 2) Creating Named credentials
Setup-> Security -> Named Credentials

Click on CREATE

¹ NO Internet Connection on OMS host

Security

Named Credentials > Create Credential

Create Credential

General Properties

* Credential name: ora

Credential description: Test Account

* Authenticating Target Type: Host

* Credential type: Host Credentials

Scope: Target Global

* Target type: Host

* Target Name: test.com

Credential Properties

* UserName: ora

* Password:

* Confirm Password:

Run Privilege: Sudo Run as:

Optionally you can grant privileges to other users

Click on Add Grant under Access Control

Access control

View

Grantee	Privilege
N	View
R	View
I	View
D	View

Rows Selected: 1

Click on **TEST & SAVE**

3) Upload the Patches to SOFTWARE LIBRARY

Enterprise -> Provisioning and Patching -> Saved Patches

Patching

Upload Patches to Software Library

Manually download the patches from My Oracle Support and upload to software library. The patches can be uploaded from local host or any of the agent host. Upon Software Library.

Basic Information

Product Family
Product
Select Type of Patch

Source Information

Upload from Local Host Upload from Agent Host

* Host [Select Target](#)

Select Credential

If you choose Preferred Credentials, the job will use your preferred credentials for each target at the time job runs, and therefore requires credentials for credentials will be used for all targets of each type.

Credential Preferred Named New

Credential Name

Attribute	Value
UserName	ora
Password	*****

[Hide Details](#)

Credential type Host Credentials
Credential Owner SYED
Scope Target
Last Modified Date Sep 4, 2013 2:07:40 PM AST
Last Modified By SYED

Fill in the details

Patch Information

Patch Metadata	Select Patch Zip File	Part Number	Release	Patch Number (Optional)	Created On (Optional)
<input type="text" value="_112030_American English_M.xml"/> Browse...	<input type="text" value="742095_112030_Linux-x86-64.zip"/> Browse...	<input type="text" value="1"/>	<input type="text" value="Oracle 11.2.0.3.0"/>	<input type="text"/>	<input type="text"/>
<input type="text"/> Browse...	<input type="text"/> Browse...	<input type="text" value="1"/>	<input type="text" value="2.0.0.0.0"/>	<input type="text"/>	<input type="text"/>
<input type="text"/> Browse...	<input type="text"/> Browse...	<input type="text" value="1"/>	<input type="text" value="2.0.0.0.0"/>	<input type="text"/>	<input type="text"/>
<input type="text"/> Browse...	<input type="text"/> Browse...	<input type="text" value="1"/>	<input type="text" value="2.0.0.0.0"/>	<input type="text"/>	<input type="text"/>
<input type="text"/> Browse...	<input type="text"/> Browse...	<input type="text" value="1"/>	<input type="text" value="2.0.0.0.0"/>	<input type="text"/>	<input type="text"/>

Click on **upload**.

A job is submitted click on job

Job Activity

Status Name [Go](#) [Advanced Search](#)

[TIP](#) By default, results for the last 24 hours are displayed. Use 'Advanced Search' for more options.

[View Results](#) [Edit](#) [Create Like](#) [Copy To Library](#) [Suspend](#) [Resume](#) [Stop](#) [Delete](#) | [View](#) [Create Job](#) [Go](#)

Select	Name	Status (Executions)	Scheduled	Targets	Target Type	Owner	Job Type
<input checked="" type="radio"/>	UPLOAD PATCH2013-09-04 14:41:25.000000061	1 Succeeded	Sep 4, 2013 2:41:25 PM GMT+03:00	test.com	Host	SYED	UploadPatchJob

Once the PATCH has been uploaded to SOFTWARE LIBRARY an entry is listed as below

Saved Patches in Software Library

Use this page to view a list of patches stored in the Software Library, search patches of your interest, upload new patches to the Software Library, and remove unwanted patches from the Software Library. If you want to apply these patches to Oracle products monitored in Enterprise Manager, create a patch plan. For information about creating a patch plan, refer to Oracle Enterprise Manager Administrator's Guide for Software and Server Provisioning and Patching available in the Enterprise Manager Documentation Library.

Search

Select All | Select None

Select	Patch Number	Created On	Type	Release	Platform	Product	Description
<input type="checkbox"/>	16742095	Mar 9, 2012	Patch	11.2.0.3.0	Linux x86-64	Oracle Database	DATABASE SECURITY PATCH UPDATE 11.2.0.3.0 (CPUJUL2013) Bugs fixed are : 13561750,16794240,14263036,15862022,13561951,16314470,15862021,14546575,14263073,13742433,14062797,14062795,14063280,14841558,12880299,16314467,14...

Now search the Patch as

Enterprise -> Provisioning and Patching -> Patches & Updates

Keying the Patch # 16742095 and click SEARCH

Software Library Patch Search

Search | Saved Searches | Recent Searches

Patch Number | Product or Family (Advanced) | Recommended Patch Advisor

Patch Number is *

Exclude superseded patches

Clear Save

* Required For JD Edwards, see the Patching Quick Links region. [Learn More...](#)

Patches & Updates (Offline Mode) Page Refreshed Sep 9, 2013 1:07:19 PM A.

Patches & Updates >

Patch Search Results

Filters: Patch Number is 16742095;

Patch Name	Description	Release	Platform (Language)	Classification	Product/Family	Updated	Size	Download Acce
16742095	DATABASE SECURITY PATCH UPDATE 11.2.0.3.0 (CPUJUL2013) (Patch)	11.2.0.3.0	Linux x86-64 (American English)	Security	Oracle Database Family	1+ month ago	15.2 MB	Software

Click on the Patch Number and click on **Add to Plan** drop down list and select **Add to new...**

Patches & Updates > Patch Search Results >

Patch Search Results

View	Detach	Patch Name	Description
		16742095	DATABASE SECURITY PATCH UPDATE 11.2.0.3.0 (CPUJUL2013) (Patch)

Close

★ Patch 16742095: DATABASE SECURITY PATCH UPDATE 11.2.0.3.0 (CPUJUL2013)

Last Updated Jul 17, 2013 4:59 PM (1+ month ago) Size 15.2 MB

Product	Oracle Database Family	Download Access	Software
Release	Oracle 11.2.0.3.0	Classification	Security
Platform	Linux x86-64	Patch Tag	All Database

Bugs Resolved by This Patch

12748240	FIX FOR BUG 12748240
12780098	FIX FOR BUG 12780098
12880299	RAC: TCP HANDLERS BLOCK IF LISTENER REGISTRATION IS RESTRICTED TO IPC W/COST

Release	11.2.0.3.0
Platform	Linux x86-64
Language	American English

Read Me Download Add to Plan

- Add to New...
- Add to Existing
- Why use a Plan?

4) Create Patch Plan

Provide Plan Name and select the Target and click **Create Plan**

Create New Plan

Plan Name * POC

Select a target Database Instance rgtest

Name	Type	Oracle Home	Host
TEST	Database Instance	/.../.../pr...	...test....

Cancel Create Plan

Create Plan - poc-test

Step 1 : Plan Information

Plans can be saved and referenced while you work out any details (especially if you have to wait on patches to be created). Use the Plan to coordinate the patch needs of team members. Then analyze and review to determine what you want to keep.

Overview

* Name: poc-test

Planned Deployment Date: Sep 9, 2013 3:15 PM

Description: Testing CPU July

Created By: SYED

Make Favorite: ☆

Click **Next**

Create Plan - poc-test

Step 2 : Patches

Here are any patches that were recommended, manually added to the plan, and additional patches added as a result of an analysis. If patches are added or removed, patches automatically added by the analysis, will be removed. Re-analysis would be required.

Patch Name	Reason	Description	Target	Target Type
16742095	Customer Added	DATABASE SECURITY PATCH UPDATE 11.2.0.3.0 (CPUJUL2013)	DEV	Database Instance

Click **Next**

Select the option; I'm going for **In Place**

Create Plan - poc-test

Step 3 : Deployment Options

How to Patch

Patch Out of Place (Recommended) In Place [Explain the choices...](#)

What to Patch

Summary: **Full Migration:** You are patching ALL Database Instance targets.

Existing Oracle Homes

/ / / /product/11.2.0.3	DEV(Database Instance)
test. .com (Host)	
LISTENER : (Listener)	

Keep the default location (where to stage)

Select **override** and select **Each Home** to enter Credentials as below

The screenshot shows two configuration panels. The top panel, 'Where to Stage', has 'Stage Patches' set to 'Yes (to location)'. The 'Stage Location' is '%emnd_emstagedir%' and 'Shared Location?' is unchecked. The bottom panel, 'Oracle Home Credentials', has 'Oracle Home Preferred Credentials' set to 'Override' and 'Specify For' set to 'Each Home'. It contains a table with the following data:

Oracle Home	Host	Databases	Normal Credentials	Privileged Credentials
/ / /product/11.2.0.3	test. .com	Database: DEV	ORA	ORA

Let's go with the Default oracle provided Procedure to Patch, we can also create like and customize the procedure (if required)

The screenshot shows two configuration panels. The top panel, 'Customization', has 'Procedure' set to 'Patch Oracle Database' and 'Conflicts' set to 'Stop at Conflicts'. The bottom panel, 'Recoverability', has a message: 'These databases have not been configured for backup.' Below this is a table:

Database	Host	Oracle Home
DEV	test. ... /	/oracle11203

At the bottom of the wizard, there are buttons for 'Exit Wizard', 'Export Plan', 'Back', 'Next', and 'Review'.

Click **Next**

The screenshot shows the 'Validation' step of the patching wizard. The breadcrumb is 'Patches & Updates > Patch Search Results > Patch: 16742095 >'. The main area shows 'Step 4 : Validation' with a yellow banner that says '> Validation Needed'. There is an 'Analyze' button and the text 'Analysis'. On the left, a sidebar shows a list of steps: 'Plan Information', 'Patches', 'Deployment Options', and 'Validation' (which is selected). Below the sidebar, it says '1 Patches Included in Analysis'.

Click **Analyze**


Step 4 : Validation

Issues Remain

Re-Analyze P

Issues to Resolve (2)

Each problem should be reviewed. Fix these issues.

Issue	Solution
 / / / /product/oracle_homes/oms/oms (Oracle Home on Host OMS) - 2 Issues	
OPatch component applicable for target" DEV" is not present in the Software Library. More Details...	

If **any issues** after analyze then go to

Enterprise -> Provisioning and Patching -> Procedure Activity

An entry is made with the Plan Name click on the entry and scroll down to see the error msg

Check for Target Properties Step Output Actions

Type Computational Start Date Sep 9, 2013 2:17:07 PM AST
Elapsed Time 56 seconds Completed Date Sep 9, 2013 2:18:03 PM AST

Step: Evaluate expression (Failed)
(.....)

ABILITY
PREREQ_STATUS:SUCCESS
PREREQ_MSG:Current user has 'operator' privilege on the selected targets.

ERROR: Some of the selected targets failed in prerequisite checks.
Following Error(s) Occured :
ERROR: OPatch component applicable for target" DEV" is not present in the Software Library
ACTION: Run the OPatch Update job to download and create the OPatch Components
Error while evaluating expression:[Error evaluating expression: \${doTargetChecks(6)} : [TargetProperties Chec]

Incidents 23 EM-03703 evaluateExpression(69298)
Centralized Logging 11:17:22 [INCIDENT_ERROR] - Error executing compute step CHECK_TGT_PROPS for procedure PATCH_SADB

Download the Opatch from MOS and upload it to software library by providing all values provided in the fields including optional as BELOW

Upload Patches to Software Library

Manually download the patches from My Oracle Support and upload to software library. The patches can be uploaded from local host or any of the agent host. Upon successful upload, a corresponding Software Library component will be created in the Software Library.

Basic Information

Product Family: Oracle System Management Products
Product: Universal Installer
Select Type of Patch: Patch

Source Information

Upload from Local Host Upload from Agent Host

Patch Information

Patch Metadata	Select Patch Zip File	Part Number	Release	Patch Number (Optional)	Created On (Optional)	Description (Optional)	Platform (Optional)	Language (CB)
112000_American English_M.xml	00000_112000_MSWIN-x64-64.zip	1	Oracle 11.2.0.0.0	6880880	9/9/13	opatch	Microsoft Windows x64 (64-bit)	American Eng
		1	Installer 1.7.0				Any	Any
		1	Installer 1.7.0				Any	Any
		1	Installer 1.7.0				Any	Any
		1	Installer 1.7.0				Any	Any

[Add Another 3 Rows](#)

Click on **Re-Analyze**

Then Click on **Deploy** to deploy the patch immediately.

Step 4 : Validation

 The plan is locked because the patches were deployed. Create a template to apply these patches on a new set of targets. [Save as Template](#)

▶ **Deployment Successful!**

▶ **Issues to Resolve (None)**

▼ **Added from Analysis (None)**

Added to the plan as a result of the last analysis.

Table ▼ View ▼

Patch Name	Reason	Description	Oracle Home	Host
No Added from Analysis Found				

▶ **Informational Message(s) (None)**