

Pilot Your OBIEE 12c Cloud Migration on Virtual Box

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CLEVELAND PUBLIC AUDITORIUM, CLEVELAND, OHIO

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- Mark Whitlock is a Certified Oracle 8i Database Administrator, Oracle Business Intelligence Applications for ERP 7 Certified Implementation Specialist, Oracle ERP Project Manager for Department of Defense
- Currently a Senior BI Architect for Aleris International Inc. in Beachwood, OH a leading Aluminum manufacturer of Rolled Aluminum Products.
- Mark has been working with Oracle products for 24 years, Oracle Business Intelligence technologies for the past 13 years as a Developer, Administrator or Architect and working with OBIEE starting with version 10.1.3. He has been involved in four OBIEE custom and three OBI Applications implementations.
- Speaker at Northeast Ohio Users Group, Northern Ohio Oracle Applications User Group, Collaborate 11 and Great Lakes User conferences.
- Mark received his Bachelor's Degree from Kent State University in Business and Technology and MBA from Jones International University with a specialization in IT Management.



Agenda

- Case study Aleris International piloted its migration from OBIEE 11.1.1.7 to 12.2.1.1 using:
 - Laptop
 - Virtual Box
 - Sample applications for OBIEE.
- Put on hold by the IT Infrastructure team
 - upgrade from 11g to 12c
 - project timeline slip
 - creative way to plan, design, and test and debug
 - opportunity to port some of the environments to the cloud materialized
- Become familiar with the new directory structures and utilize the new Migration and Baseline Validation tools



Objectives

- Learn how to install Oracle Virtual Box
- Set up Virtual networking connections to your organization's data sources.
- Download and import Oracle Virtual Box Images
- Discover how to Navigate Sample Applications for Oracle Business Intelligence
- Utilize the Migration and Baseline Validation tools



Agenda

- Install Virtual Box
- Install Sample Apps
- Setup your OBIEE Instance
- Migration Tool
- Baseline Validation tool
- Consider Cloud options
- Port to Cloud





- Use your laptop or PC to pilot the entire migration using Virtual Box and Sample Applications
- In no time you will be up and running
- Using migration and baseline validation tools
- Connecting to your real data
- Verifying dashboards
- Running reports in 12c and
- Preparing to migrate your RPD and Webcat to the cloud.



Licensing

- Virtual Box
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- Sample Apps
- <u>http://www.oracle.com/technetwork/licenses/obiee-sampleapp-license-2029753.html</u>

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- Find out what your system capabilities are on your laptop.
- 12 GB RAM would be best.
- VM needs about 6 GB ram,
- Very large hard drive, 400 GB free space, 1 TB, run multiple images
- Virtual Box website, download software, system specific
- Oracle owns Virtual Box , no personal support, only enterprise Virtual Box Support
- Personal support Virtual Box community, very good











- Down load the file and install it on your system
- Just click run program to install
- After it is finished you will have a Virtual Box on your system and an icon on your desktop
- Make sure to choose the path to the external drive if you are using one, otherwise you will have to move the files later, when you run out of space on your hard drive, (and you will!!)







ew Settings Discard Start		C Details Snapshots
	📃 General	E Preview
	Name: SampleAppv511p Operating System: Other/Unknown (64- bit)	
	System	
	Base Memory: 6200 MB Boot Order: Hard Disk, Optical Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX	SampleAppv511p
	Display	
	Video Memory: 40 MB Remote Desktop Server: Disabled Video Capture: Disabled	
	Storage	
	Controller: IDE Controller IDE Primary Master: Controller: SATA SATA Port 0: SampleAppv511p-a	y appliance-disk1.vmdk (Normal, 200.00 GB)
	Audio	
	Disabled	
	Network	



- Next get the images for 12c VM Sample App v 511
- I prefer the v511 over v607 because more control over back end object like Weblogic:
- <u>http://www.oracle.com/technetwork/middleware/bi-</u> foundation/obiee-samples-167534.html



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SampleApp v511 Image Download	
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SampleAppv311p-appliance.zip.005	
SampleAppy511p-appliance.zip.004	
🗄 Checksums (MD5)	



SampleApp v511 Patches	Mandatory Patches to be applied to your SampleAppv511 image
€ v511 Visual_Analyzer Access Patch	For all users- resolves access issue when connecting to Visual Analyzer from a remote browser or Mobile HD application.
v511 SampleApp 'R' deployment patch	This patch resolves a issue when installing necessary R packages.
	For all users- resolves inconsistent networking behavior from within the v511 release.



 Copy the files to a directory on your PC (make sure you have lots of hard drive space)

- Unzip the first SampleAppv511-appliance files
- Will create the SampleAppv511-appliance folder
- One file called SampleAppv511-appliance.oca











- Unzip the other two patches
- Try to start virtual box
- And import the Sample App v 511 appliance image (ova)
- It will look like this:







and the second

🤌 Sam	npleAppv511p - Se	ettings 🔹 👔 💽
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	Display	Processor(s):
\bigcirc	Storage	1 CPU 4 CPUs
	Audio	1%
₽	Network	Extended Features: 📝 Enable PAE/NX
	Serial Ports	
Ø	USB	
	Shared Folders	
•	User Interface	
		OK Cancel



Oracle BIEE 12c SampleApp v511 virtual box networking IP-Patch01

About this FAQ

This faq will resolve inconsistent network behavior with SampleAppv511. After applying this patch a network adapter 'eth0' will be created that will be used in all type of networking scenarios, i.e., NAT, bridged. In addition a new logon 'splash screen' and desktop icon will be created with further details.

Resolution

Resolve inconsistent network behavior in the SampleAppv511 release Total time to implement < than 1 minute

Use Case Scenariost

All users of SampleAppv511

Step 1: (perform this FAQ off a clean reboot)

Download the 511-IP-Patch01 to your SampleAppv511 image

- Extract to any location on your SampleAppv511 image
 - Right click on the 511-IP-Patch01.zip and choose extract here
- A folder called 511-IP-Patch01 will be created.
- Run apply_patch01.sh
 - Open a new terminal window and run ./apply_patch01.sh
- When prompted reboot the image



Step 2:

Once your reboot is completed a new desktop icon will be shown and you will have a network adapter of 'eth0'





 This is how Sample Apps v511p looks when it boots successfully:





and the second

- Start up the database and WebLogic server
- "start db and bi1":







 *Note - You will use the Red Arrow to shut it down (stop "database and bi1")

• The BI instance should be up

• Use the Weblogic browser to go to the OBIEE 12c login, which should be bookmarked in favorites:



- Choose "1. BI 12c Sample BI App"
- The choose "12c BI Login"
- Login with "prodney" and "Admin123"
- (These should auto fill for you):



SampleAppv511p (Snapshot 2 After	r AD setup) [Running] - Oracle	e VM VirtualBox			
File Machine View Input Devi	Places System				
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SampleAppv511p [Running] - Oracle VM VirtualBox	
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Sales Person	
Customers	105 Per Name Year P15 Total 1- Revenue
Differ Objects	2010 Total 23,500,000
Facts	2017 Total 23,500,000
	Add to Briefing Book

GLOC

- Bookmarks to manage the Server in the Mozilla Browser in the Image.
- (This is part of why this version is easier for administrative tasks)
- These bookmarks will take you to the:
- Oracle WebLogic Server Administration Console
- Oracle Enterprise Manager
- Visual Analyser
- Apex
- Etc...



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- Oracle VM Virtual Box Manger Description
- Shows the list of installed applications on this system:



Description

SampleAppv511 12c GA

- OBI 12c
- Visual Analyzer
- MAD
- MapViewer 12c
- Sample Applications Content
- Essbase 11.1.2.4
- Oracle Database 12.2.0.2 (imdb)
- Oracle Apex 4.2.6
- SQL Developer 4.1.0
- AWM 12.1.0.2a
- Oracle Data Mining
- Oracle Spatial and Graph
- Oracle R 3.1.1/ORE 1.4.1
- BigData (plugin)
- CDH 5.1.2 w/cloudera manager
- Oracle Bigdata SQL
- Oracle BigData connectors
- EPM 11.1.2.4 Standalone (plugin)



- How to transfer files back and forth to the VM
- Mount the shared drive commands:
- Mount -t vboxsf [-o OPTIONS] sharename mountpoint
- My laptop:
- sudo mount –t vboxsf documents /app/Markshare
- (I created a directory "Markshare" in the "app" directory}
- * hint* don't use caps in LINUX



Next get a snapshot of the instance so you can roll back to it if necessary:





Choose "Take a Snapshot" Give it a descriptive name and description, say OK.





Close the VM and save the state, this way the database a BI will be up next time you access it:





Migration from OBIEE 11g to 12c

Here is the Oracle Fusion Migration guide from OBIEE 11g to 12c:

https://docs.oracle.com/middleware/1221/core/BIMIG/toc.htm

Oracle[®] Fusion Middleware Migration Guide for Oracle Business Intelligence 12c (12.2.1.1) E74567-01

Note: The BI Migration Tool does not preserve any customized features of the 11g system. You must manually copy the customized features of 11g system to the 12c system post migration.





- Make sure you have done a full catalog upgrade of your 11g instance to 11.1.1.7 especially if you have upgraded from previous version, otherwise the migration will fail
- Once you have 12c installed you need to create the bimigration-tool.jar package by execution the following script found on the bi server you did the install on





 The Migration is exactly the same as if you are doing a server migration, so we will not discuss it here, the paper has detailed steps

 Once it is complete your 11g environment will be in your 12c Sample Application Virtual Box and will connect to your source and target just like your PC





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Migration from OBIEE 11g to 12c

Next set up an alternate provider (like Active Directory) if you are not using Default Authentication.

Next complete any post migration steps you may need to do, here are some possible things you might need to do depending on your system:





Base Line Authentication tool

Here is the document for using the Baseline Validation Tool:

Oracle® Business Intelligence

Comparing Oracle Business Intelligence Deployments Using the Oracle Business Intelligence Baseline Validation Tool Release 12c

E55769-04

June 2016



Base Line Authentication tool

 The Baseline Authentication tool is implemented exactly the same way as you would on a BI Server, so we will not discuss the specifics here

- Detail information is covered in the paper
- Next are what the reports should look like







BUSINESS INTELLIGENCE

REPORT BASELINE VERIFICATION SUMMARY

SUMMARY PIVOT	SUMMARY DATA
Name	ExportReportsToCSV
Run start time	2015-10-05-10.52.58
Run end time	2015-10-05-10.52.58

BASELINE VERIFICATION PIVO	DT BASELINE VERIFICATION DAT
Totalcount	47
Fail Count	14
Pass Count	33
Missing Count	0
New Item Count	0
Unprocessed Item Count	0
Failed to Download Report Count	0

BASELINE VERIFICATION PIVO	T BASELINE VERIFICATION DAT
Deployment Name	Src_ReportPlugin
Server Name	http://10.244.39.15:7780/analytics
Deployment Name	Tgt_ReportPlugin
Server Name	http://10.128.7.233:7780/analytics



Base Line Authentication tool

REPORT BASELINE VERIFICATION DETAILS

REPORT BASELINE VERIFICATION FAILURES

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Saved Columns and Global Variables	SERVER LINK	BERVER LINK	Fail	FILELINK	FILE LUNK
Teesmap	SERVER LINK	SERVER LINK	Fail	FILLLINK	PILELINK
Customers Details	SERVER LINK	SERVER LINK	Fail	FILELINE	FILE LINK
Customers Profile	SERVER LINK	SERVER LINK	Fail	FILELINK	FILE LINK
Geo Pronipter	SERVER LINK	SERVER LINK	Fail	FILLLINK	FILELINK
Brand Cost and Unit Price Trend	SERVER LINK	SERVER LINK	Fail	FILE LINK	EILELINK
Trellise	SHRVIR LONG	SHRVER LINK	Fail	FILE LINK	FILE LINK
Order Details	SERVIE LINK	SERVER LINK	Fail	P.H. B. L1266	FILE LINK.
Traffial	SERVICE LINK	SHRVERLINK	Fail	FILTLINK	EILE LINK
Revenue Demographics	SERVER LINK	SERVER LONK	Fail	FILM LINK	PILE LINKS
Target Completion	SERVER LINK	SHEVER LINK	Pail.	FILE LINK	PILELINK

REPORT NOT FOUND

NAME FIRST SERVER LINK SECOND SERVER LINK RESULT FIRST DEPLOYMENT SECOND DEPLOYMENT

REPORTS FAILED TO DOWNLOAD

NAME FIRST SERVER LINK SECOND SERVER LINK RESULT FIRST DEPLOYMENT SECOND DEPLOYMENT

UNPROCESSED REPORTS

NAME FIRST SERVER LINK SECOND SERVER LINK RESULT FIRST DEPLOYMENT SECOND DEPLOYMENT

NEW REPORT FOUND

NAME FIRST SERVER LINK SECOND SERVER LINK RESULT FIRST DEPLOYMENT SECOND DEPLOYMENT



Base Line Authentication tool

NEW REPORT FOUND

NAME FIRST SERVER LINK SECOND SERVER LINK RESULT FIRST DEPLOYMENT SECOND DEPLOYMENT

REPORT BASELINE VERIFICATION PASSED

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Orders and Density By LOBs	SERVIR LINK	STRVID LINK	Paas	FILE LINK	TILL LINK
Orders and Density By Year	SERVIR LINK	STRVIES LINK	Paas	FILE LINK	FILL LINK
100% Stacked Bar Chart	SERVIRLINK	STRVIE LINK	Pane	FILE LINK	FILE LINES
IntervalDataType	SERVIELLINK	SERVER LINK	Pues	FILELINK	PILE LINK
ane Geometries Thickness	SERVIR LINK	SERVIR LINK	Puon	FILELING	FILLELINK
Maps As Detail in MD	SERVIER LINK	STRVED LINK	Рлав	FILELINE	PILE LINK
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Simple Example	SERVIN LINK	STRVER LINK	Pass	PILE LINK	FILE LINK
simple Table	SERVIR LINK	SERVIR LINK	Pass	FILE LINK	FILLELING
simpleBarChart	SERVER LINK	SERVER LINK	Paus	FILE LINK	FILL LINK
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Vaterfall Bridge Report	SERVER LINK	SERVER LINK	Pass	FILE LINK	FILE LINE.
Vew Viounia	SERVIR LINK	SERVER LINK	Pnon	FILELINK	FILELINE
Contribution Waterfall	SERVER LINK	SERVER LINK	Pass	FILELINK	FILELINK
Jaugee	SERVER LINK	STORWEIR LINES.	Pass	FILELINK	FILE LINK
Average Sales Price	SERVER LINK	SERVER LINK	Puss	FILELINK	FILELINK
Product Order Trend	SERVERLINK	SERVER LINK	Pass	FILELING	FILELINK
Quarterly Budget Status	SERVER LINK	SERVERLINK	Pass	FILELINK	FILELINK
Street Level Map	SERVER LINK	SERVER LINK	Pass	FILELING	FILELINK
History Overview	SERVER LINK	SERVER LINK	Pake	FILE LINES	PTLE LINE
Monthly Revenue Trend	SERVER LINK	SERVER LINK	Paas	FILE LINK	FILE LINK
New Monthly Revenue Trend	SERVER LINK	SERVER LUNK	Pass	FILE LINK.	FILELINK
Performance Indicators	SERVER LINK	SERVERLINK	Pass	FILELINK	FILE LINK
Converted Revenue	SERVER LINK	SERVER LINK	Pass	FILE LINK	FILE LINK
Custom Group	SERVIERLINK	SERVER LINK	PRAN	FILELINE	FILE LINK
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Revenue Breakup	SERVER LINK	SERVER LINK	Pass	FILELINGS	FILE LINCE
Farget Completion Chart	SERVIRLINK	SERVER LINK	Pass	FILLLLONK	FILLULINK
Trellis3	SERVER LINK	SERVER LINK	Pass	FILELINK	FILLLINK
Build_506p	SERVIER LINK	SERVER LINK	Pass	FILE LINK	FILL LINK





• You have now completed your 11g to 12c migration

Now onto the Cloud

• But how to start and which way to go?



Cloud

- First get some information on the two types of cloud services.
- Oracle's initial offering Business Intelligence Cloud Service. (BICS)
- Oracle newest offering is Oracle Application Cloud service (OAC).
- Although it may still be possible to subscribe to BICS most organization are focusing on OAC.





The first place to start learning about Oracle Cloud services is from Oracle, usually your sales representative, Oracle Education .user groups, conferences Analytics and Data Summit, Oracle Education





Cloud

- A great resource aside from Oracle to learn more about OAC is from a company called InterRel.
- They have published a book called "Look Smarter than you are with Oracle Analytics Cloud Standard"
- The book, based loosely on a using a popular movie, called the "The Business Analytics Martian" describes your journey to the cloud. It takes you through the preparation of the OAC and service configuration process, although much of the book speaks about Essbase, the latter chapters describe BI and Data Visualization (DV).
- InterRel also offers webinars and consulting services



Cloud www.interrel.com









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 There are plenty of other good Oracle partners out there and most of them are represented here at the conference but this book seemed to resonate with me and demystify some the cloud mystery.





So after reviewing BICS and OAC which one did we choose?





- As often in life, it happened the other way around it was chosen for us
- Our on premise 12c OBIEE environment unable to recover
- Create a .bar file from the Virtual Box
- Migrate it to the OAC .
- OAC environment established and bar file imported, you just need to make a connection to your on premise database.





- How did everything turn out?
- That will be answered in my next paper:

"OBIEE ADMINISTRATORS, DON'T FEAR THE CLOUD"





- You have all the resources to do a 12c Migration right at you fingertips
- Virtual Box make prototyping easy
- You can connect to your data sources
- All tools and utilities work the same as on Bl Servers
- There is plenty of help out there, just reach out
- Do not fear the Cloud





Questions & Answers

