Oracle Business Intelligence Enterprise Edition 11.1.1.6.2 BP1

SampleApp V207 - Virtual Machine Image

Deployment Guide

July 2012

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1 Introduction

This guide walks you through the deployment steps of Oracle VM VirtualBox Image for OBIEE SampleApp v207.

The Sample Application (SampleApp) for Oracle Business Intelligence Suite Enterprise Edition Plus (EE) is a comprehensive set of illustrative examples and best practices for OBIEE **11.1.1.6.2 BP1**. It demonstrates a broad range of OBIEE 11g capabilities including Enhanced visualizations such as interactive dashboards, modeling best practices, Action Framework, BI Publisher, Scorecard and Strategy Management, Mobile style sheets, Semantic layer modeling, Multi-source federation and Integration with products such as Essbase, Oracle OLAP, ODM, TimesTen, ORE and more.

The SampleApp contents and its example custom codes, including but not limited to, any example custom Java programs, JavaScript, SQL, SQL Loader Scripts, Shell Scripts, R Scripts and reports, are distributed free for demonstrative purposes only. It is neither maintained nor supported by Oracle as a licensed product. We specifically do not guarantee the accuracy of the results produced by any of these custom utilities. You must accept and comply with OTN License Agreement to use OBI EE SampleApp.

For more details refer: http://www.oracle.com/technetwork/middleware/bi-foundation/obiee-samples-167534.html

1.1 Image Contents

1.1.1 Software

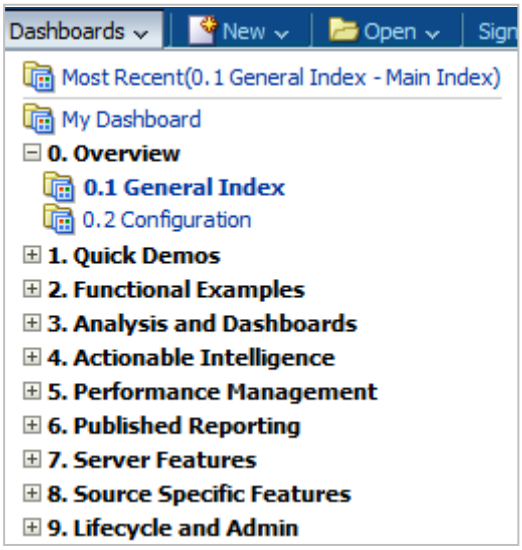
The SampleApp V207 image includes following preconfigured and integrated software:

- OBIEE 11.1.1.6.2 BP1
- Weblogic Server WLS 10.3.5.0
- Oracle Database 11.2.0.3.0 (with Apex, OLAP, ODM & ORE)
- Oracle TimesTen 11.2.2.3.0
- Oracle Essbase 11.1.2.1
    - Essbase Server
    - Essbase Client
    - Essbase Studio Server
    - Essbase Integration Services
    - Provider Services Web Application
    - Essbase Administration Services Web Application
- Oracle Internet Directory
- SQL Developer 3.1.07
- OLAP AWM 11.2.0.3
- Map Builder 11.1.1.6.0

See the section Image Software Inventory in this document for further details on the software installed

1.1.2 Content Organization

The dashboards and analyses within SampleApp are grouped together by related functional/ product areas. It is sequenced and organised under dashboards as shown in the screenshot here.



Once SampleApp is deployed, navigate to “General Index” dashboad to see the full list of its contents. “Configuration” dashboard contains the setup details such as user credentials, database diagram, dimentional hierarchy diagrams, rpd physcial, logical and logical hierarchy diagram and so on.Many of the other dashboard pages have inline help documentation on the contents exibited on those respective pages/ analyses.

1.2 Prerequisites

1.2.1 Hardware requirements

1.2.1.1 Disk Space

The process of deploying the image will have a peak disk space requirement of approximately 73 GB. Once deployment is completed and after image download files are cleaned up, the running image will require about 50 GB of free space. If you download zipped version of the image, then unzipping process will require its own specific disk space in addition.

1.2.1.2 Physical Memory

A machine with 4 GB or of physical memory is required, higher than 4GB is recommended.

1.2.1.3 File system

File system support for large files (>40 GB): the FAT32 file size limit is only 4 GB. VM image files are larger than 4 GB and therefore, FAT32 is not suitable as a file system for running this VM.

1.2.2 Oracle VM VirtualBox:

If you do not have Oracle VM VirtualBox installed on your machine, download and install it from: http://www.oracle.com/technetwork/server-storage/virtualbox/downloads/index.html.

2 Download and Installation

2.1 Image Download

Download all V207 files from http://www.oracle.com/technetwork/middleware/bi-foundation/obiee-samples-167534.html (zip files and ovf file) and unzip them.

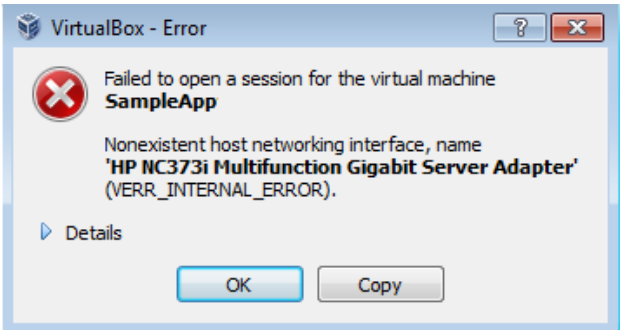
2.2 Deploying Appliance on VirtualBox

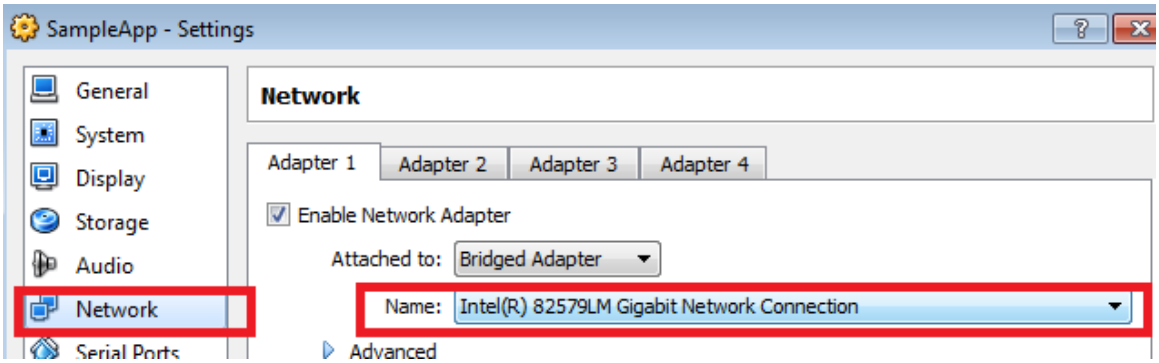
2.2.1 Import Appliance Image in VirtualBox

Open Oracle VM VirtualBox. Select File->Import Appliance and choose SampleAppv207_OBI_11.1.1.6.2BP1.ovf file. Select 'Next'. In Appliance Import Settings screen, go to the Virtual Disk Image property. Change the path to a desirable location where you'd like to create the deployed disk image files and click on Finish. It might take about 45 mins to import (depending on host machine speed). After completing import, you may delete the unzipped .ovf and .vmdk files (keep the vmdk and imported files).

Troubleshooting Tip: nonexistent host network interface

If you get 'non existent host network interface error' while you power-on the image, then select OK and change image setting to use a existing network interface.





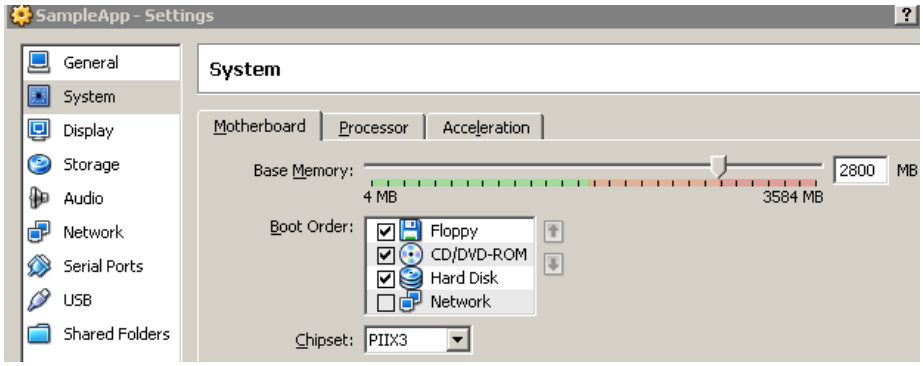
3 Configuration and Starting

3.1 Configure Settings and Start Image

3.1.1 Configure Settings

Before starting the image, in the Virtual Box client home page, choose the image entry SampleApp_V207 and select Settings, then System option.

- Configure the Base Memory that you want to allocate to the image when running. Performance of the image will be very slow with less than 2.4GB of memory, you should consider allocating at least this much. The image will not properly run Essbase Examples with less than 3.5GB of allocated RAM memory.



- Visit the Processor tab and allocate proper number of processors to the image depending on your host hardware.
- Click the network option in settings, select the proper network configuration. Host only, for example, will allow the host (only the host) to network directly with the image.
- Exit the Settings dialog box when done.

3.1.2 Starting the image

First proceed to below important checks before you start the image :

3.1.2.1 Turn VPN clients off

Running the image while the host machine is on a VPN connection may result in some WLS/OBIEE services not starting properly. **Disconnect from VPN before starting your image**.
However, being physically connected to an intranet (like ORCL network), not via VPN, will not create a problem.

3.1.2.2 Possible error starting the image : verr_vmx_msr_locked_or_disabled

During the process of importing, you may receive an error with verr_vmx_msr_locked_or_disabled. This error may be related to your bios and requires 'System' settings of the image to be adapted. Try some of the suggestions below one by one, if this does not fix it, internet forums on this error message will provide with several alternate solutions :

- Review the number of CPUs you have activated in the settings of the image and reduce it to the minimum.
- Disable the VT-X/AMD-V & APIC flag in the accelerator tab of the system settings.

3.1.2.3 Starting the image

- In the Virtual Box client home choose the image entry SampleApp_V207 and click start. This will start the image. When prompted for login details, provide oracle/oracle as the username/password. This will you log you in to the Linux operating system.

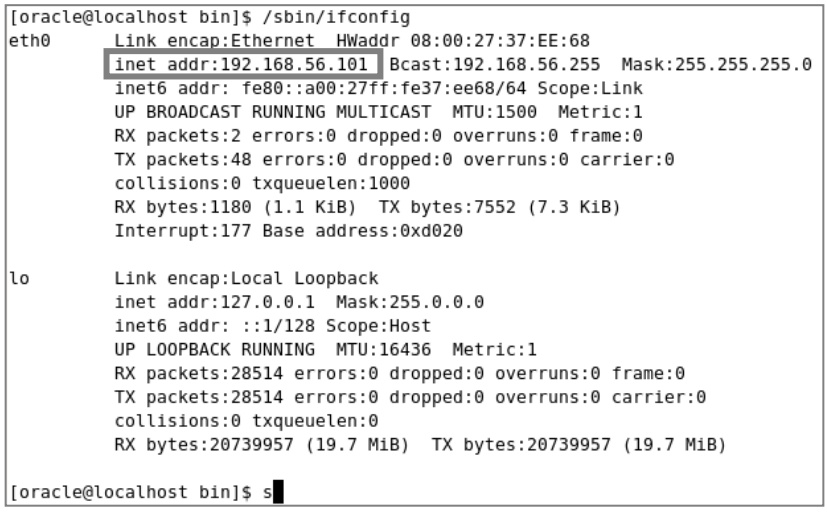
3.2 Login credentials

LINUX OS Login	- oracle / oracle , The OBIEE shortcuts are all configured with this user. - root / oracle is the root user, not to be used in normal usage of the image.
Oracle Database	- Admin: system/oracle, SYS/Admin123 - Schema users - BISAMPLE/BISAMPLE, BISAMPLE_EXA/BISAMPLE_EXA, BI_AIRLINES/BI_AIRLINES, obiee_navteq/obiee_navteq etc. - RCU users: BIRCU_BIPLATFORM/Admin123 Note:- SQLDev on the image has predefined connections to all the important schemas.
OBIEE	- RPD password : Admin123 - Admin login: weblogic/Admin123, prodney/Admin123 Note:- Refer to the dashboard page 0.2Configuration->Users for a complete list of available users and their data visibility privileges.
Essbase Server	- admin/password
APEX	- admin/Welcome1#
TimesTen	- BISAMPLE_TT/BISAMPLE_TT

Also see the section 'Image Software Inventory" for more details on other specific login credentials

3.3 Configuring Hosts File

1) Depending on your network configuration and the option selected in the virtual box settings, you may need to configure the hosts file to point it to the correct IP address. Services will not start properly if the IP address is not correct. Please follow the steps below to configure the hosts file:
2) Get the IP address of the image – For this, open a terminal window on the running image, and type the command ***/sbin/ifconfig.*** Note down the IP address under the heading "inet addr" (e.g.: inet addr:192.168.56.101)
3) Add an entry in /etc/hosts file and add and entry for obieesampleapp.us.oracle.com pointing to the correct IP address of your machine
4) Save the file and proceed to starting services



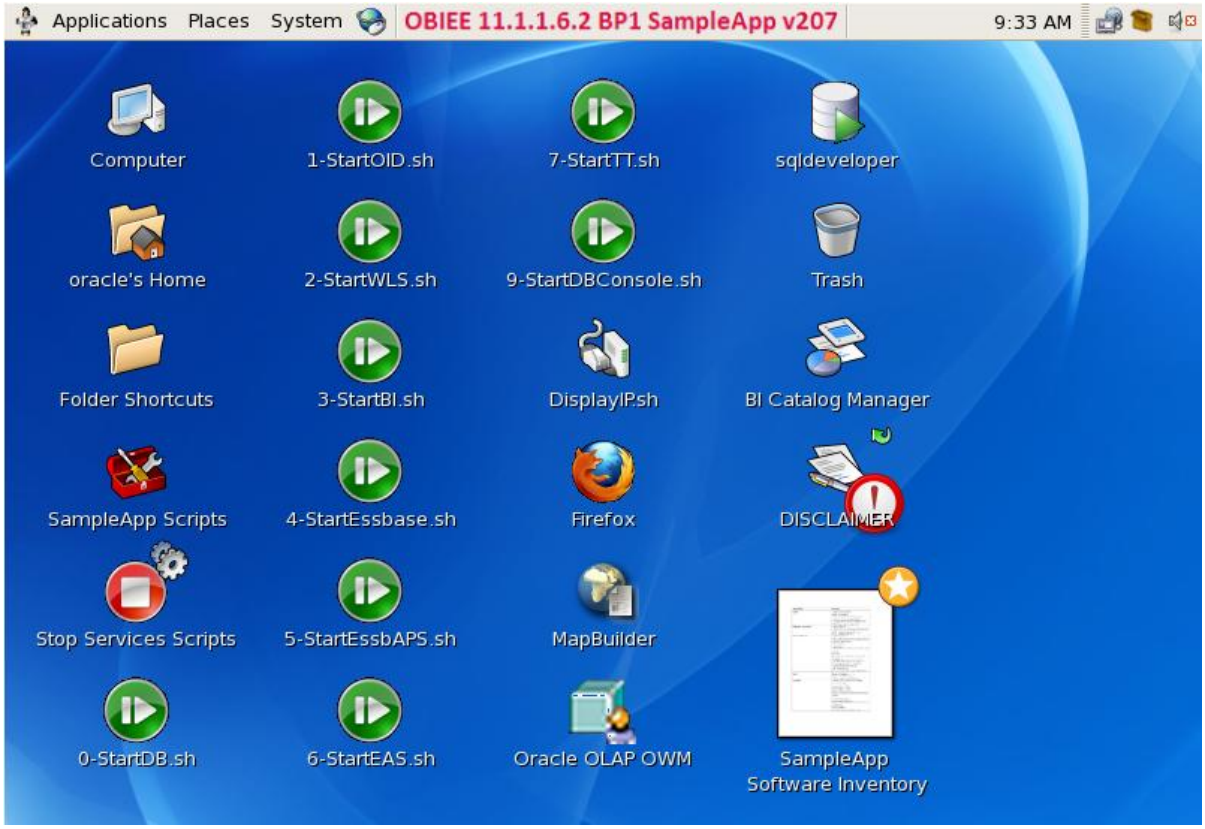
3.4 Starting Services on the Image

Important Preliminary checks : if any of these items is not true, the BIEE services will most likely not start up :

1) logged in as ‘oracle’ user : you must NOT be logged in as ‘root’ user to bring up the services
2) VPN service is off on the host machine
3) Host file was correctly edited : (refer to step 3.3 above)

3.4.1 Startup Scripts

1) To fulfill the dependencies, it is important to start the services in the sequence indicated in screenshot below – from 0 to 9. Wait for each of them to start completely before proceeding to next.
2) Start scripts are accessible from the Desktop as shown below. They are marked using the green play icons. They are also accessible from terminal by navigating the folder as indicated in the second screenshot below.
3) Scripts to stop these services are saved under the folder “Stop Services Scripts” and indicated by red colored stop icon as shown below.



```
[oracle@obieesampleapp Desktop]$ pwd
/home/oracle/Desktop
[oracle@obieesampleapp Desktop]$ ll
total 272
-rwxrwxr-x 1 oracle oracle    256 Nov 30  2011 0-StartDB.sh
-rwxrwxrwx 1 oracle oracle    185 Jun 21 06:53 1-StartOID.sh
-rwxrwxr-x 1 oracle oracle     78 May 23 00:33 2-StartWLS.sh
-rwxrwxr-x 1 oracle oracle    168 Jun 21 06:54 3-StartBI.sh
-rwxrwxrwx 1 oracle oracle     73 Apr 13 09:16 4-StartEssbase.sh
-rwxrwxrwx 1 oracle oracle     90 May 10 01:46 5-StartEssbAPS.sh
-rwxrwxrwx 1 oracle oracle     86 Jun 22 10:50 6-StartEAS.sh
-rwxrwxrwx 1 oracle oracle    175 Jun 21 07:24 7-StartTT.sh
-rwxrwxr-x 1 oracle oracle    125 Jun 21 07:23 9-StartDBConsole.sh
```

3.4.2 Example : Starting WebLogic Server

Few notes on WLS startup:

1) On the desktop, double click on StartupScripts folder and select “2-startWLS.sh” and choose ‘Run in Terminal’ option. (/home/oracle/Desktop/).
2) Wait for the message that shows "Server started in RUNNING mode". This indicates that WLS is up
3)

```
<Mar 17, 2011 2:34:46 AM PDT> <Notice> <WebLogicServer> <BEA-000365> <Server sta
te changed to RUNNING>
<Mar 17, 2011 2:34:46 AM PDT> <Notice> <WebLogicServer> <BEA-000360> <Server sta
rted in RUNNING mode>
```

Leave this terminal window open

3.4.3 Shortcuts and Scripts included in image

3.4.3.1 Folder Shortcuts:

Folder shortcuts to frequently used folder locations are saved at: **/home/oracle/Desktop/FolderShortcuts.** This shortcuts folder is accessible on the desktop upon login.

3.4.3.2 ‘Places’ shortcut entry

To speed up your access to Oracle Home, the image includes an entry in the ‘places’ menu that will take you directly in the OBIEE Oracle Home directory (/home/oracle/obiee)

3.4.3.3 SampleApp Scripts

Several custom scritps and utilities are saved on the virtual box image providing examples of functional customizations on the image. Dashboard page 9.11 SampleApp Scripts provides an overview of these scripts. For further details and specifications on these scripts, refer to the Appendix section of this document

4 Accessing SampleApp Contents

4.1 Important: Apply Fixes for Known Issues

Please review the known issues and fixes posted on SampleApp OTN page and apply them. At the time of authoring this document, there is only one reported issue and its fix posted there. Additional fixes may be posted later as need arises.

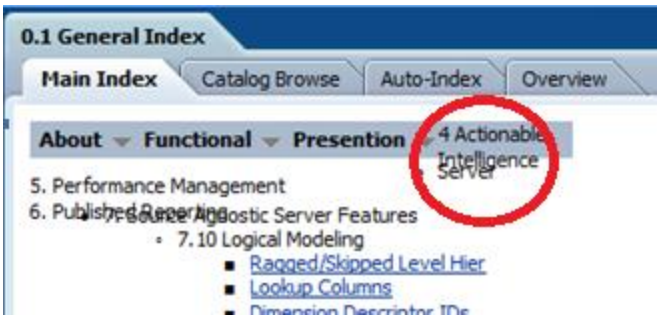
OBIEE 11.1.1.6.2 BP1 - Sample Application (V207)

SampleApp V207 VirtualBox Image *(turnkey virtual environment with full SampleApp preconfigured)*

File	Description
VB Image-Deployment Guide	Deployment Instructions for SampleAppV207 VirtualBox Image.
What's New in V207	New content highlights in SampleApp V207 compared to its previous release.
V207 Known Issue Fixes	Fixes for known issues within this SampleAppV207 Image

Issue #1 –

Description: The was a bug in the dropdown Content Menu on the left hand top corner of the Main Index page, causing the menu items not to confine to the drop down menu bar. This was visible in IE 8 and IE 9 browsers and was causing the main index page to be pushed down on the page. To fix this issue, follow the instructions from our OTN page download shown above.



Issue #2 –

Desktop shortcuts 5 – StartEssbAPS.sh and 6 – StartEAS.sh when executed in 'Run in Terminal' mode do not start the required APS and EAS services.

4.2 Connecting to Analytics from within the image

Open the Firefox browser on the image desktop, Analytics URLs are bookmarked in the menu bar at the top of the browser.

4.3 Connecting to Analytics from a browser in the host client

To get the IP address of the VM machine, open a terminal window and type the command /sbin/ifconfig. This command will display the ip address of the VM. Note down the ip address under the heading inet addr.

Eg:- inet addr:192.168.56.101

```
[oracle@localhost bin]$ /sbin/ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:37:EE:68
          inet addr:192.168.56.101  Bcast:192.168.56.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe37:ee68/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:2 errors:0 dropped:0 overruns:0 frame:0
          TX packets:48 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1180 (1.1 KiB)  TX bytes:7552 (7.3 KiB)
          Interrupt:177 Base address:0xd020
```

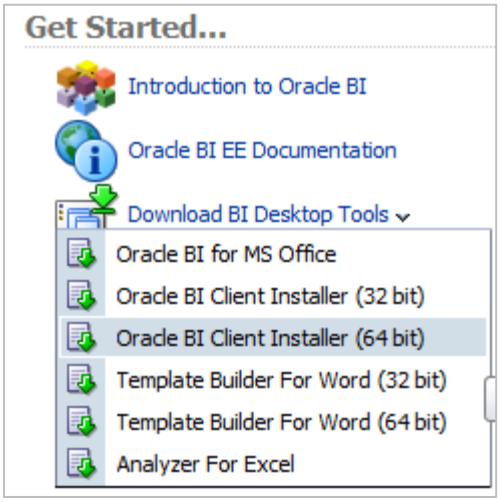
Once you have the ip address, from your host machine browser, type in the analytics URLs you need to access web based UIs from the image. NOTE: this requires VPN services to be turned off.

4.4 OBIEE Cache is on by default !!

OBIEE server cache is turned on by default on the image. Some specific examples may require you to disable or bypass cache to allow direct db access.

4.5 Admintool access to SampleApp RPD

For admintool access, you must install the OBIEE Admintool client on your host windows box. OBIEE client can be downloaded from the “Get Started” section on the Home page in your OBIEE environment.



Install OBIEE Admintool client locally. On your host machine where OBIEE client is installed, create an ODBC connection to connect to the BI Server. To do this, you need to access the IP address of the VM image. To get the IP address of the image, from the running image, open a terminal window and type the command /sbin/ifconfig
Note down the ip address under the heading inet addr. Eg:- inet addr:192.168.56.101. Confirm that you can ping this IP address from your host machine, and complete ODBC Connection. You can now connect with admintool to your VM RPD.

4.6 Importing Oracle OLAP metadata using local BI Admintool

If you have a local install of BI Admin Tool on your host and want to import OLAP metadata from the database inside the VM, you need to update the JAVAHOST parameter to the right value in NQSConfig.ini file on your local Admin Tool install.

JAVAHOST_HOSTNAME_OR_IP_ADDRESSES = "192.168.56.101:9810";
NOTE: Replace the server IP 192.168.56.101 with the right IP of you VM.

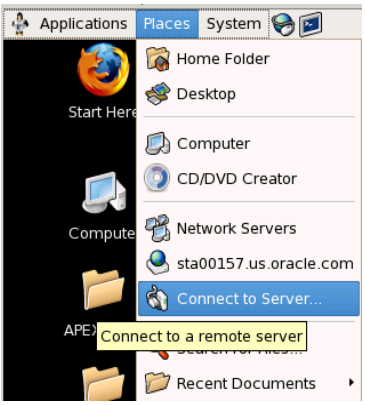
4.7 Accessing a Host Shared Folder

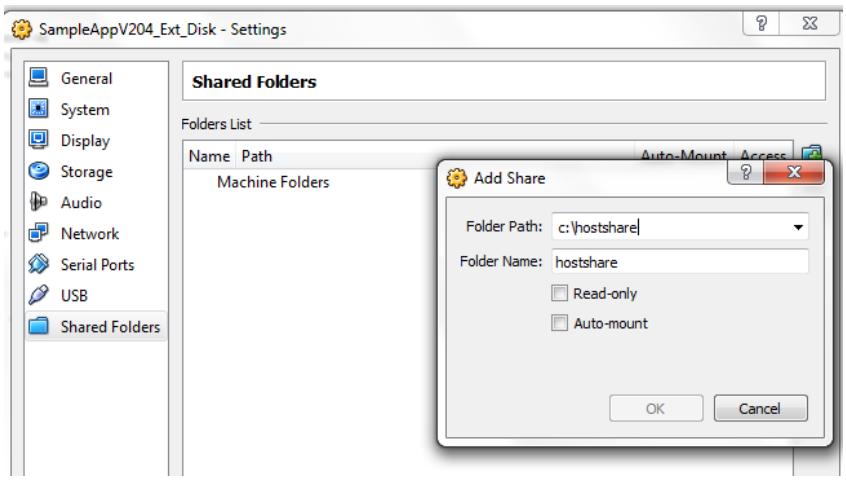
In order to access a shared folder on the host environment, perform the following.
Option 1

- Login to the VM image.
- On the tool bar, click on Places->Connect to Server
- In the service type, choose Windows Share. Enter the username and domain name of your host machine and click on Connect. After connecting, the shared folders of the host machine will be displayed.

Option 2

- Within your VirtualBox Manager, go to Shared Folders and Add a share



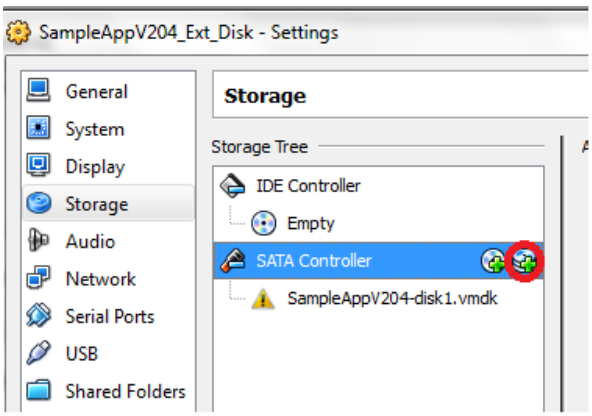


- Choose a folder path on your host machine and provide a sharename like hostshare
- Next, within the VM image, create a folder like /home/oracle/vmshare
- Open a terminal and login as root/oracle. Enter the following command.

  sudo mount -t vboxsf hostshare /home/oracle/vmshare
- This command will make the c:/hostshare contents available within /home/oracle/vmshare. You can then copy/retrieve files between the image and the host server.

4.8 How to increase disk space on the VM

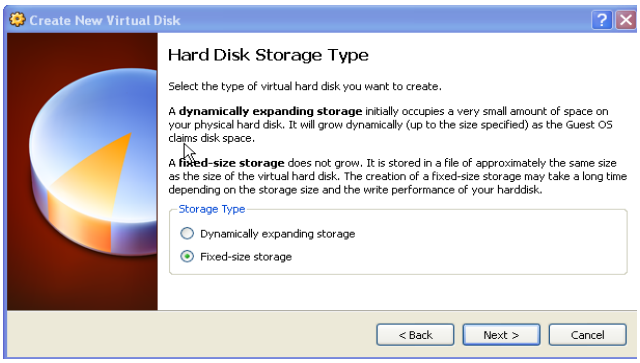
If you are running out to disk space on the /home/oracle drive, follow the steps given below. This will guide you to add a new disk to the existing /home/oracle drive

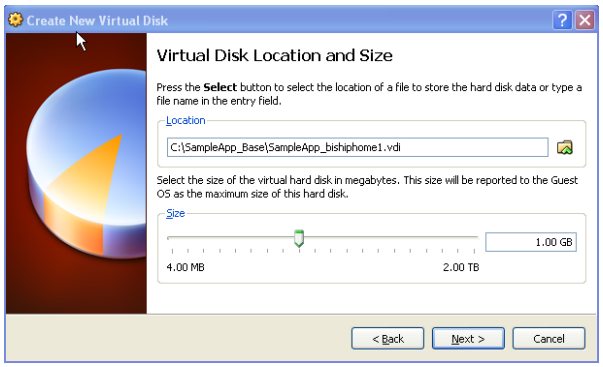


To begin with, shutdown the image. Go to the Settings->Storage of the image. Choose SATA Controller and click on the Hard Disk option

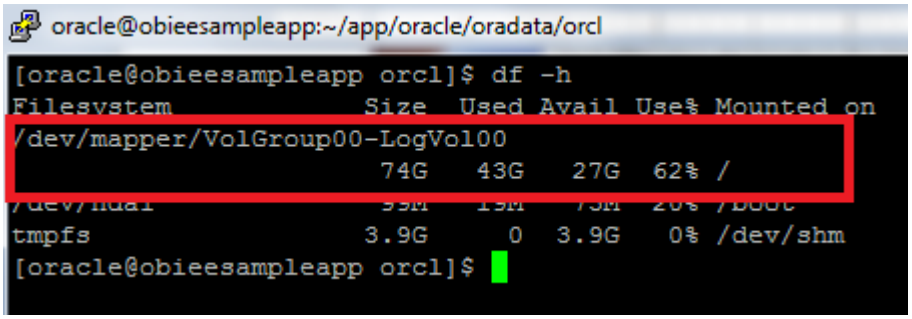
Create New Disk

Choose Fixed –size storage option

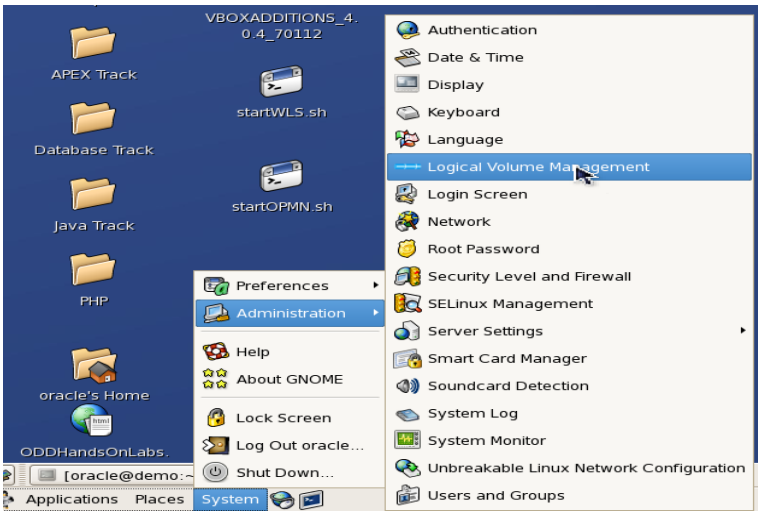




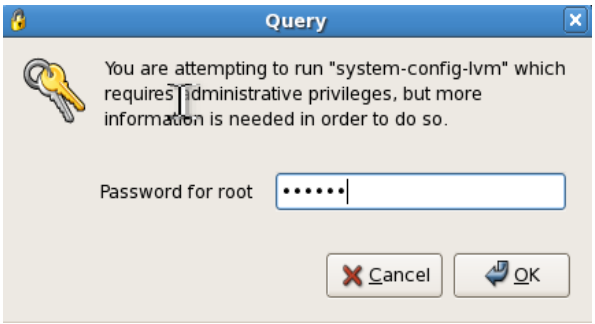
Set the size as 1.00 GB and provide the appropriate file path and file name on your setup. (Place the file in the same directory as the other vmdk files of the image for ease of use)
Click on Finish. Next start the image and follow the steps given below to make this 1Gb visible to the linux file system and to add it to the /home/oracle drive
Once the image comes up, first check the existing size of / by executing the command df on a terminal window



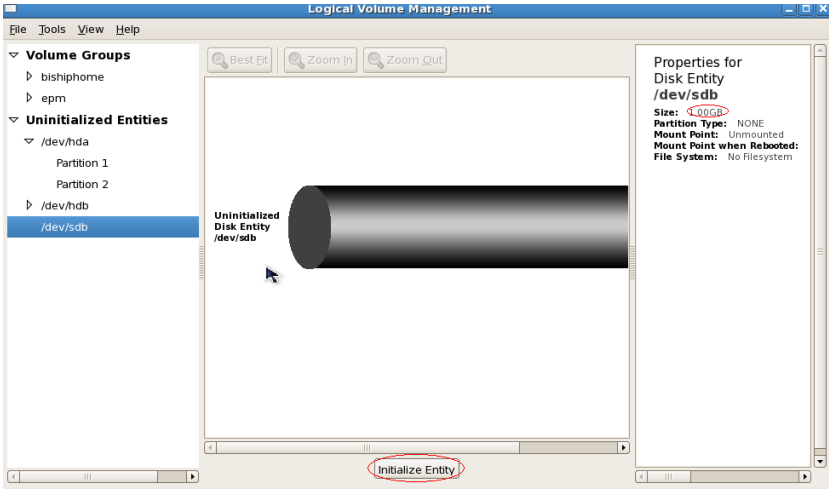
Next, click on System->Administration->Logical Volume Management



In the dialog box that comes up, enter the password for the root as oracle

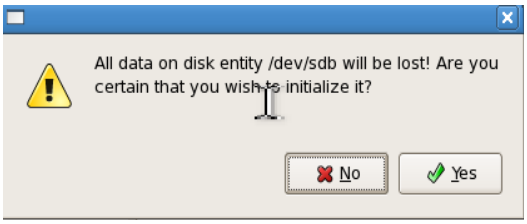


In the Logical Volume Management screen, go to the uninitialized disk entry and click on the Initialize Entry button

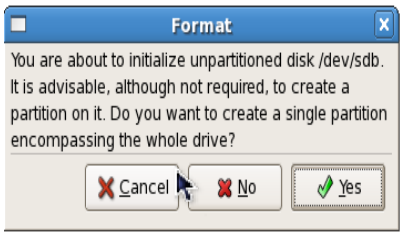


Click Yes on the dialog box

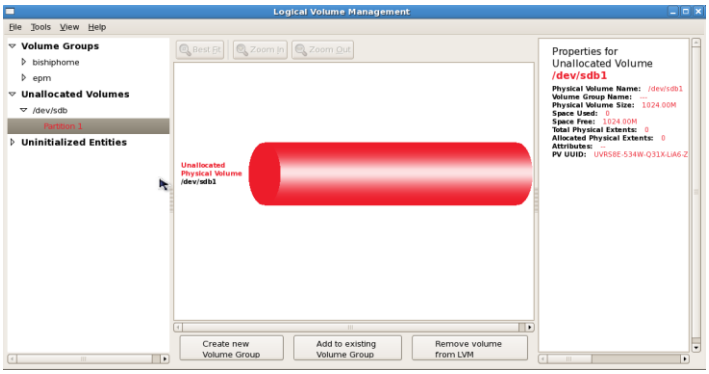
NOTE:- MAKE SURE YOU ARE CHOOSING THE UNINITIALIZED DISK AND NOT ANY OTHER DISK BECAUSE THE NEXT STEP WILL DELETE ALL THE DATA ON THE DISK .



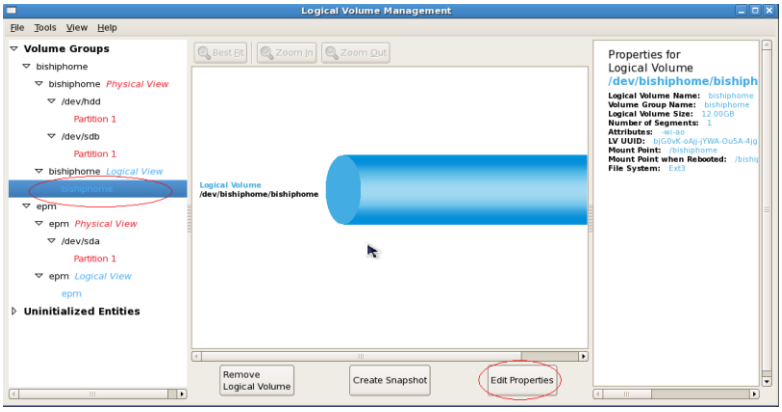
Select ‘Yes’ in the next dialog box



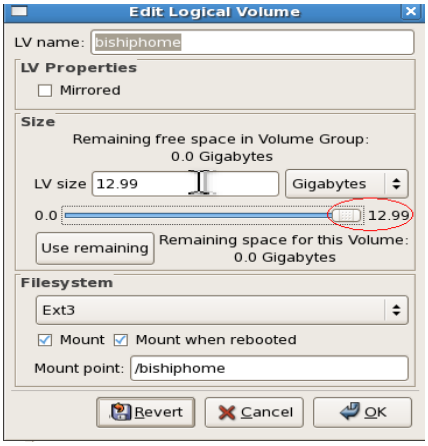
Next, add the new volume to an existing Volume group



Next, go to the logical volume and click on Edit properties.



Increase the LV size to the maximum value and select ‘Ok’.



Finally, close the Logical Volume Management screen and check for the increased disk size.

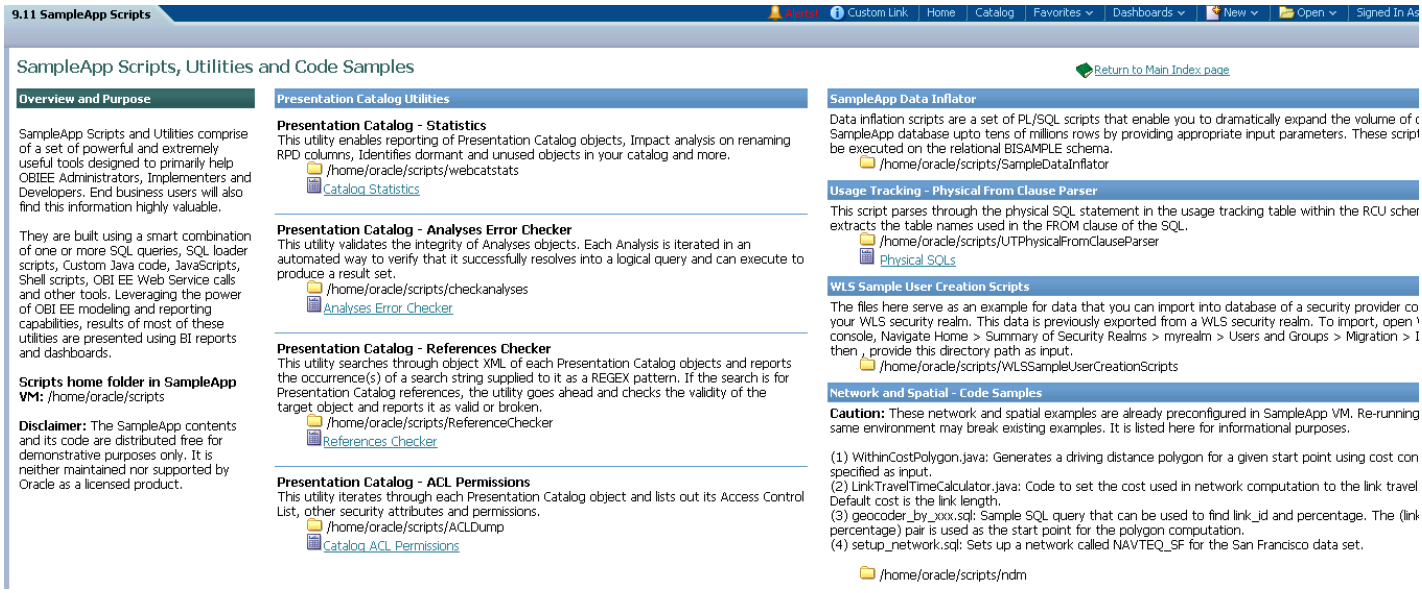
5 Image Software Inventory

Software	Details
OBI EE	Version: 11.1.1.6.2 BP1 /home/oracle/obiee URL: http://localhost:7001/analytics RCU Schema: BIRCU_BIPLATFORM RCU Login: BIRCU_BIPLATFORM/Admin123 OBIEE Login: weblogic/Admin123 plus all other functional users described in dashboard page 0.2Configuration->Users
Weblogic Server for BI	Version: 10.3.5.0 Console URL: http://localhost:7001/console/ EM URL: http://localhost:7001/em/ Admin Login : weblogic/Admin123
Oracle Database	Version: 11.2.0.3.0 ORACLE_HOME=/home/oracle/app/oracle/product/11.2.0/dbhome_1 ORACLE_SID=orcl Console URL: https://localhost:1158/em/console/aboutApplication TNS Entry: (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST = obieesampleapp.us.oracle.com)(PORT = 1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME = orcl.us.oracle.com))) Admin Login : sys/Admin123 or system/Admin123
Apex	/home/oracle/apex /home/oracle/apex_listener URL: http://localhost:7001/apex/
Times Ten	Version: 11.2.2.3.0 (32 bit Linux/x86) Server Port: 53393 Daemon Port : 53392 Instance admin: oracle Instance home directory: /home/oracle/app/oracle/product/TimesTen/tt1122 Group owner: oracle Daemon home directory: /home/oracle/app/oracle/product/TimesTen/tt1122/info PL/SQL enabled. Login: BISAMPLE_TT/BISAMPLE_TT
EPM	Version: 11.1.2.1 /home/oracle/epm Installed components 1) Common Components 2) Essbase Product Common components 3) Product Common Components 4) Oracle common files 5) Tools 6) Foundation Services - Weblogic Application Server - Oracle http server - Static Content Files

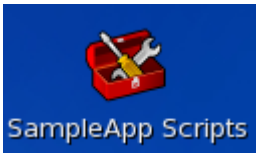
Software	Details
	- Workspace Web Application - Foundation Services Web Applications 7) Essbase - Essbase Server - Essbase Studio Server - Essbase Integration Services - Provider Services Web Application - Essbase Administration Services Web Application - Essbase Client Links : EAS - http://localhost:10080/easconsole/console.html APS- http://localhost:19000/aps/APS and http://localhost:13080/aps/APS Workspace - http://localhost:19000/aps/workspace Shared services - http://localhost:19000/interop Smartview -http://localhost:13080/aps/SmartView Login: admin/password ***Note:*** *In order to use SmartView, first install Smartview client on your desktop. Then launch an Microsoft Office product like Excel. Create a Private Connection by providing the URL as http://localhost:13080/aps/SmartView Add the server name as obieesampleapp.us.oracle.com:1423. When prompted for credentials, enter admin/password*
OID	Oracle Instance Location : /home/oracle/oid/bioid2 Oracle Instance : bioid2 Domain Option : No Domain Automatic Port Detection : true Enterprise Manager Agent http://obieesampleapp.us.oracle.com:5164/emd/main Oracle Internet Directory SSL Port : 3131 Non SSL Port : 3060 User: cn=orcladmin Password: Admin123 Database : obieesampleapp.us.oracle.com:1521:orcl.us.oracle.com User: cn=orcladmin Password: Admin123 OID Setup with WLS - User base dn: dc=us,dc=oracle,dc=com - All User Filter = (&(cn=*)(objectclass=person)) - User from name filter: (&(cn=%u)(objectclass=person)) - User object class: person - Group base dn = dc=us,dc=oracle,dc=com - All group filters = (&(cn=*)(|(objectclass=groupofNames)(objectclass=orcldynamicgroup))) - Group from name filter = (|(&(cn=%g)(objectclass=groupofNames))(&(cn=%g)(objectclass=orcldynamicgroup))) - Static group - Cn Object class = groupofNames - Static member dn = dc=us,dc=oracle,dc=com
Oracle R	R-2.13.1
OLAP AWM	Version: 11.2.0.3
Map Builder	Version: 11.1.1.6.0
SQL Developer	Version: 3.1.07

6 APPENDIX : Functional Scripts

Several custom scritps and utilities are saved on the virtual box image, for use either, within the image itself, or,for code reuse on other environments outside of the image itself, These scripts provide example of functional customization to ease some tasks, or increase the example scope on the image. Dashboard page 9.11 SampleApp Scripts provides an overview of these scripts.



Scritps are saved under the scripts folder indicated in the screenshot below. This is also accessible via “SampleApp Scritps” icon on the desktop. Most of these sub folders contains a README.txt file that explains the purpose and usage of respective scritps.




```
[oracle@obieesampleapp scripts]$ pwd
/home/oracle/scripts
[oracle@obieesampleapp scripts]$ ll
total 48
drwxrwxr-x 5 oracle oracle 4096 Jul 20 10:05 ACLDump
drwxrwxr-x 4 oracle oracle 4096 Jun 22 09:11 awm
drwxrwxr-x 3 oracle oracle 4096 Jul 20 10:12 checkanalyses
drwxrwxr-x 2 oracle oracle 4096 Jun 22 08:00 loadtest
drwxrwxr-x 2 oracle oracle 4096 Jul  9 23:58 mapbuilder
drwxrwxr-x 3 oracle oracle 4096 Jul 16 07:56 ndm
-rwxrwxrwx 1 oracle oracle  127 Apr  5 15:58 purgeadr.sh
drwxrwxr-x 5 oracle oracle 4096 Jul 20 10:11 ReferenceChecker
drwxrwxr-x 4 oracle oracle 4096 Jul 23 06:49 SampleDataInflator
drwxrwxr-x 2 oracle oracle 4096 Jul 23 13:34 UTPhysicalFromClauseParser
drwxrwxr-x 6 oracle oracle 4096 Jul 20 10:12 webcatstats
drwxrwxr-x 2 oracle oracle 4096 Jul 20 10:16 WLSSampleUserCreationScripts
```

Attention :

The SampleApp scripts code, SQL, SQL Loader Scripts, Shell Scripts, R Scripts and reports, are distributed free for demonstrative purposes only. It is neither maintained nor supported by Oracle as a licensed product. We specifically do not guarantee the accuracy of the results produced by any of these custom utilities, in particular when used with different OBIEE releases than the one used in the source Vb image.

6.1 Data Inflation Scripts

6.1.1 Description

SampleApp Data inflation SQL scripts enable you to dramatically expand the volume of data in OBIEE SampleApp (up to tens of millions rows). These scripts are written in PL/SQL and sequentially allow to increase data volume in some dimension tables, in revenue fact table, or to change the time window period of the main fact tables.
The data inflation scripts allow to inflate data volume on the following tables:

- Employee (Value based dimension)
- Customers
- Products (Regular and Ragged/Skiplevel)
- Time
- Main revenue facts (SAMP_REVENUE_F and relational aggregates)

The scripts also allow to age facts data : shift ahead or back in time the exact time period initially covered by original fact data.

31 # of Orders (Cnt Distinct)	32 # of Cust with Orders (Cnt Distinct)	33 # of Empl with Orders (Cnt Distinct)	35 # of Products with Orders (Cnt Distinct)	T62 # of Days	T66 # of Years	T64 # of Months	23 Avg # of Orders by Customer
20,000,000	10,000	1,027	1,000	4,048	11.08	133	2,000.00

Facts impacted by aging scripts are : SAMP_REVENUE_F and relational aggregates, SAMP_HEADCOUNT_F, SAMP_QUOTAS_F, SAMP_TARGETS_F, SAMP_CUSTOMERS_D (Dimension table)

These scripts can be run on the BISAMPLE_EXA schema (and also BISAMPLE schema) to inflate the data to your needs. BISAMPLE_EXA schema sits on a separate default tablespace called bisample_exa which has been defined with AUTOEXTEND on. Hence be careful when you run the inflator script for large volumes as the tablespace will continue to grow and might occupy all the available disk space on the image. If you wish to generate large volumes of data, then consider increasing the VM image size (refer to section How to increase space on the VM) or restore the BISAMPLE_EXA schema on a different more powerful machine and run the scripts.

6.1.2 Usage

For more details on the execution sequence of the various scripts, program specifications etc please refer to the SampleApp_Data_Infator_Guide. The code and the guide can be found on the image at the directory : */home/oracle/scripts/SampleDataInflator*

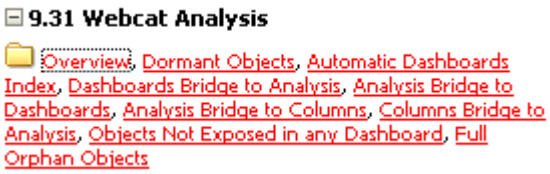
6.1.3 Disclaimers

- These scripts affect only the main Oracle relational db datasource which is the BISAMPLE and/or BISAMPLE_EXA schema . These scripts do not handle the other datasources like TimesTen, Essbase etc.
- Once these scripts are executed, data within BISAMPLE schema will no longer be the same as the rest of the data sources and some federation examples may show discrepancy between the sources after relational data is inflated.
- Any pre-built or hardcoded filters with SampleApp or using BISAMPLE data may no longer work as expected
- The purpose of these scripts is only to create large data volumes that may support performance testing of OBIEE platform. The facts distribution of created data will either mimic the initial existing dataset, or be random (your choice). Besides volume, the inflated data will not generate meaningful business like facts distribution. If you choose the random data generation option, then the existing charts in SampleApp will show a completely different pattern as the newly generated fact values are random numbers and don't have the distribution pattern of the initial dataset..

6.2 Webcat Analysis

6.2.1 Description

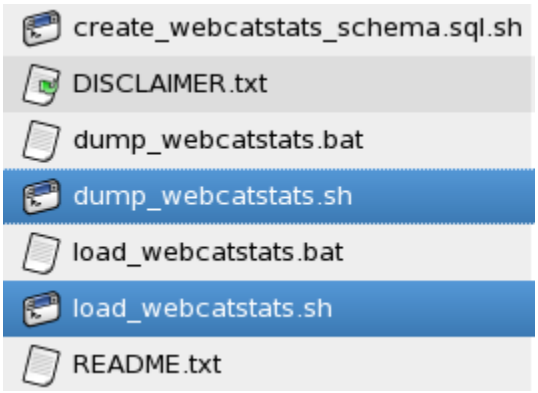
Web Catalog Statistics Application, which is prepackaged with in SampleApp image, acts as a reporting layer for the Webcat metadata objects. It provides detailed insight into Web catalog content, spots dormant catalog objects, assists in performing Webcat impact analysis for metadata changes, presents automated dashboard index and more. There is an interesting set of dashboards that leverage these results and facilitate some very useful analyses. Take a look at dashboard 9.31 Webcat Analysis for some examples.



Once the underlying web catalog objects are modified (new objects added or existing object attributes modified or deleted), statistics need to be refreshed.

6.2.2 Usage:

Webcatstats scripts can be found under the folder **/home/oracle/scripts/webcatstats**



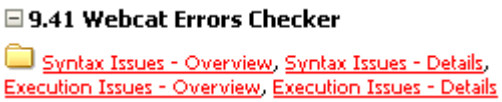
- **create_webcatstats_schema.sql**: This script creates db schema objects required for loading webcat statistics data. This only needs to be executed once. By default, these objects are created in the BIRCU_BIPLATFORM schema.
- **dump_webcatstats**: This script executes OBIEE catalog manager to dump Presentation catalog information into flat files. These files are saved under /rep directory.
- **load_webcatstats**: This script leverages sqlldr (SQL Loader) to parse and load the catalog manager reports (output from previous script) into the BIRCU_BIPLATFORM schema.
- **Refreshing Webcat Statistics:** In order to refresh webcat stats in the image, run dump_webcatstats first and followed by load_webcatstats. This will replace the old data by the new data in the table.

ATTENTION ! OBIEE Cache may need to be cleared to report the last results of the scripts on the dashboards !

6.3 Webcat Error Checker

6.3.1 Description

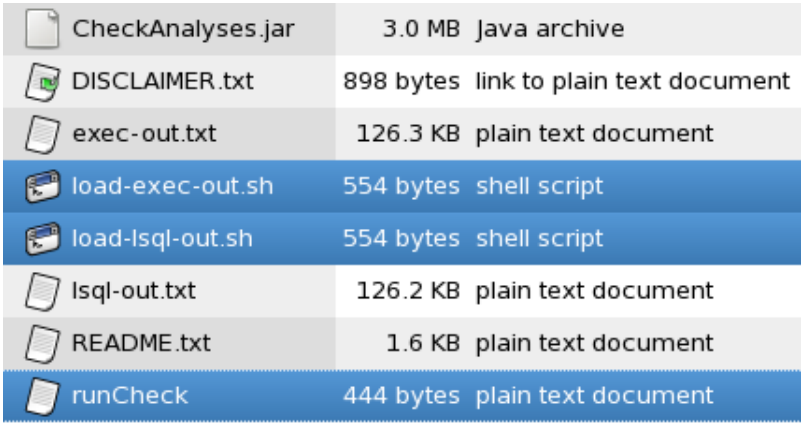
These are another set of useful scripts that help in validating the integrity of all the analyses within your environment. Ongoing updates to the RPD, changes to the database tables etc could lead to some of the existing analyses to break. Webcat error checker can be run on these catalogs to detect these broken analyses. Each analysis is iterated in an automated way to verify that it successfully resolves into a logical query and can execute to produce a resultset. The results of this utility are written to a file which can then be loaded into a database table by a distinct subscript.



Dashboard 9.41 Webcat Errors Checker shows some examples of this application.

6.3.2 Usage

Webcat error checker scripts can be found on the image under */home/oracle/scripts/checkanalyses*



This application can be executed in two modes which you can swap by editing the runcheck file within the script directory.

- **lsql** - In this mode, reports that cannot be resolved to a logical SQL are identified. The report is not actually executed and hence this mode executes comparatively way quicker.
- **exec** – In this mode, reports are executed on the physical database and number of rows returned by the server are displayed. Reports with no results as well as reports with odbc errors will display 0 rows. Having OBIEE cache turned on or off may influence the results when running this mode.

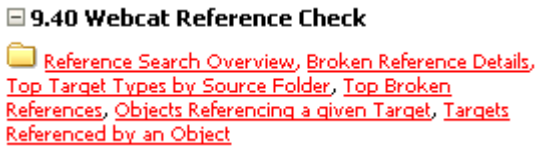
By default, the configuration is running both modes, lsql then exec. Once the scripts completes, the loading of each lsql and exec results in db table must be completed by running the load scripts. The results will be appended to the existing data in the table, with a run date marker.

ATTENTION ! OBIEE Cache may need to be cleared to report the last results of the scripts on the dashboards !

6.4 Webcat Reference Checker

6.4.1 Description

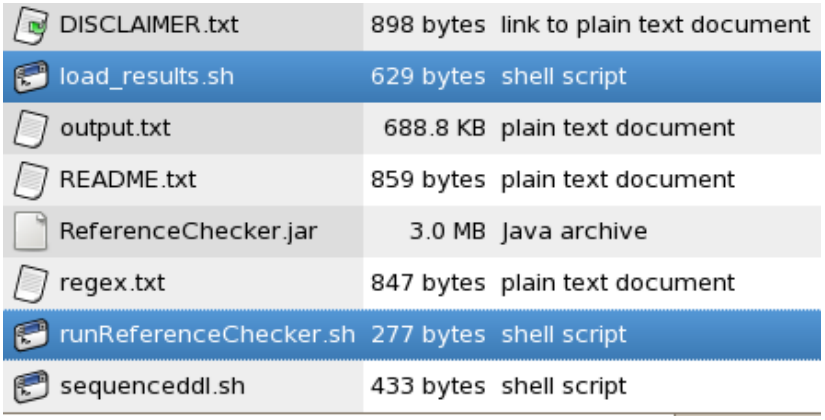
This utility searches through the object XML of each Presentation Catalog object (including Analyses, dashboards, Actions etc) and reports the occurrence(s) of a search string supplied to it as a REGEX pattern. If the search is for Presentation Catalog references, the utility checks the validity of the target object and reports it as valid or broken. In essence, it highlights all the objects whose target object references are no longer valid (either removed or moved to different location within the catalog. For example, if an analysis has an action link that points to a target and if the target has been moved or removed, then this utility will identify this as an error and report it. The invalid target object could be an analysis, dashboard, prompt, target document (in case of scorecards) etc.



Dashboard 9.40 Webcat Reference shows some examples of this utility.

Webcat reference check scripts can be found on the image under

/home/oracle/scripts/ReferenceChecker



6.4.2 Usage

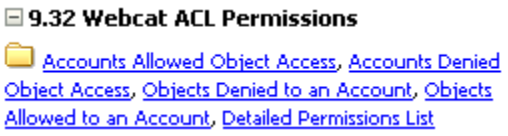
- Execute "runReferenceChecker.sh" to search through the catalog and run the checks.
- Then run "load_results.sh" file to upload its result into database. This load truncates the old results in the table and loads the new results instead

ATTENTION ! OBIEE Cache may need to be cleared to report the last results of the scripts on the dashboards

6.5 Webcat ACL Permissions Dump

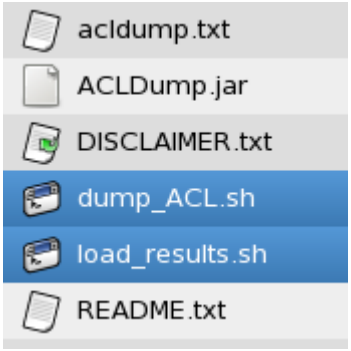
6.5.1 Description

This utility iterates through each Presentation Catalog object and lists out its Access Control List, other security attributes and permissions. List of fields included in its output are listed below.



Dashboard 9.32 Webcat Errors Checker shows some examples of this application.

Webcat ACL Permissions Dump scripts can be found on the image under
/home/oracle/scripts/ACLDump



6.5.2 Usage

- Execute "dump_ACL.sh" to dump the ACL info to a tab delimited text file.
- Then run "load_results.sh" file to upload its result into database.

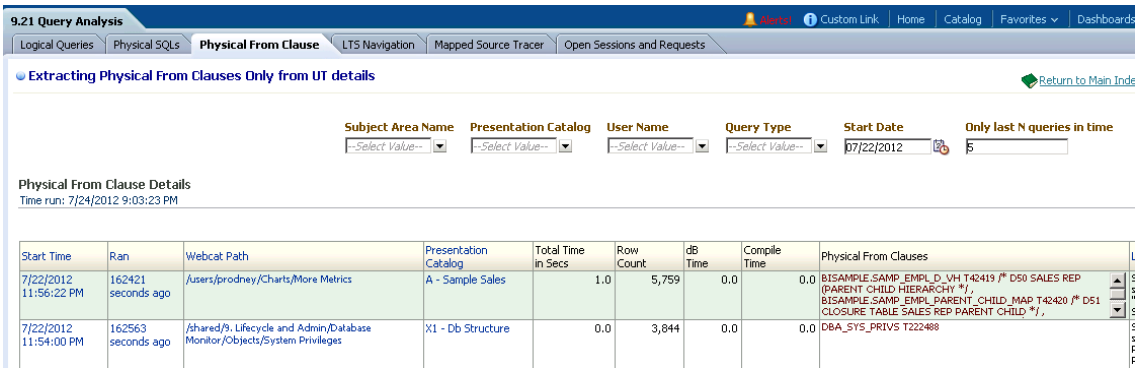
ATTENTION ! OBIEE Cache may need to be cleared to report the last results of the scripts on the dashboards !

6.6 Usage Tracking (UT) - Access to physical SQLs

6.6.1 Description

Whenever a report is executed, Usage Tracking functionality stores the physical SQL query that OBIEE Server generates into a table called S_NQ_DB_ACCT within the RCU schema. These physical SQL queries are accessible on the UT dashboards in SampleApp, but are often long and can be complicated, thereby making it difficult to manually find out the actual FROM clause within the query, to determine the table names.
UTPhysicalFromClauseParser is an application that parses through these long SQL statements and extracts the contents of the FROM clause within these statements. These FROM clause objects are made available as a view which can then be mapped within the rpd to enable reporting. Dashboard page 'Physical From Clause' under 9.21 Query Analysis shows an example of the usage.

The scripts can be found on the image under */home/oracle/scripts/UTPhysicalFromClauseParse*



6.6.2 Usage

- Connect to your RCU schema (where S_NQ_DB_ACCT table resides) and execute the following
- First execute 1_Create_UT_Obj.sql to create the necessary object types
- Next execute 2_UT_Function.sql to create the function that will parse the query text and extract the FROM clause
- Next execute 3_UT_Source_View.sql to create the view that will expose the results of the above mentioned function.

6.6.3 Important Note

On line number 15 in the file 2_UT_Function.sql, there is a function call to extract the strings from the blob column. dbms_lob.substr(query_blob,1642, 1). Although SQL allows a maximum limit of 4000 characters, this code currently only handles 1642 characters, as setting it beyond this value returns a "ORA-06502: PL/SQL: numeric or value error" (possibly due to insufficient memory on the image). This implies that for each query string, this code extracts the first 1642 bytes and then processes these bytes to extract the FROM Clause.
On your environment, consider increasing this limit to 4000 (change the function as dbms_lob.substr(query_blob,4000, 1)) if you do not run into this issue.

6.6.4 Disclaimer

OBIEE Server generates several different kinds of queries depending on what's defined in the analysis and also the relationships in the underlying data model. This application **does not** guarantee to handle all possible kinds of queries that the server generates.