

Home Lab setup and Familiarization of E-Business R12.2

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Introduction

This paper will help us prepare a home Lab for researching on E-Business Suite 12.2 architecture, practicing hands-on projects in a small scale home environment and getting familiarization on the techstack and advanced architecture in quick time.

Making use of virtualization

On a home Windows server or machine, we can install Oracle Virtualbox.

<https://www.virtualbox.org/wiki/Downloads>

We can install Oracle Linux 7 on top of Virtualbox

<http://www.dbaexpert.com/blog/install-oracle-linux-7-on-virtualbox/>

We can setup the network for the Virtual box. This is a little tricky and the following article has the steps neatly laid out:

<https://www.pythian.com/blog/test-lab-using-virtualbox-nat-networking/>

More references on Virtualbox Networking:

https://blogs.oracle.com/fatbloke/entry/networking_in_virtualbox1

<https://technology.amis.nl/2014/01/27/a-short-guide-to-networking-in-virtual-box-with-oracle-linux-inside/>

SSH tunnelling will help you get server access via Putty.

Make sure you can access the internet from the virtual server. This is needed for downloads of stage files or patches.

Also you need to be able to access the oracle public yum server for OS packages download.

Building the stage

Download the E-Business Suite 12.2 stage files from <https://edelivery.oracle.com>

This is the Oracle Software Delivery cloud.

Grab the latest startCD.

Run the buildStage.sh script from startCD/Disk1/rapidwiz/bin/ directory.

If there are any missing stage files, it will be reported as a warning and needs to be downloaded from edelivery and placed in the stage location to be picked up once buildStage.sh is run again.

Wget is a good executable to download all the files using script.

Installation of Oracle Applications E-Business Suite 12.2

The following document has all the pre-requisites captured for installation of Oracle Applications.

Oracle E-Business Suite Installation and Upgrade Notes Release 12 (12.2) for Linux x86-64 (Doc ID 1330701.1)

The installation is similar to standard E-Business Suite installations using rapidwiz.

You need to select the port pool. Database has an option to be configured as RAC along with the install.

Use UTF-8 for character set as it may help later as well. With 12.2 comes the dual file system and weblogic. As such, we need to define the file systems fs1, fs2 and fs_ne (non-editioned file system) along with the install.

After the installation is over, you can browse the front-end Applications as well as the backend database and app tiers to check on what processes and components are up. You need to gain good familiarity on the file systems as well.

Understanding Edition Based Redefinition

Before proceeding with patching activities to gain hands-on experience, you need to have a good and clear idea about Edition Based Redefinition. This is a new feature that comes with Oracle Database 11g Release 2 and helps online patching possible. The following articles will help you come up to speed on this concept in quick time:

<https://oracle-base.com/articles/11g/edition-based-redefinition-11gr2>

A 3-part series from Tom Kyte

<http://www.oracle.com/technetwork/testcontent/o10asktom-172777.html>

<http://www.oracle.com/technetwork/issue-archive/2010/10-mar/o20asktom-098897.html>

<http://www.oracle.com/technetwork/testcontent/o30asktom-082672.html>

Online Patching for E-Business R12.2

In short, the various phases of online patching are prepare, apply, finalize, cutover and cleanup.

The following documents will give you a good idea of the various phases of online patching. Also you will get to know the troubleshooting steps and log files of importance.

<http://expertoracle.com/2016/02/21/online-patching-adop-in-oracle-ebs-r12-2/>

How To Check if a Patch is Applied in 12.2.x? (Doc ID 1963046.1)

1531121.1 - online patching readiness report

How To Automatically Set the Current Run or Patch Edition / File System for EBS 12.2 (Doc ID 1545584.1)

12.2 E-Business Suite - Collecting Online Patching and fs_clone Log Files (Doc ID 1542162.1)

Oracle® E-Business Suite Maintenance Guide Release 12.2 Part No. E22954-21 -

https://docs.oracle.com/cd/E26401_01/doc.122/e22954.pdf

Practice all the patching cycles and I am sure you will hit a lot of issues along the way.

Run the ETCC Code Checker for Database and Middle-tier

Before you apply the AD and TXK Delta 8 release update packs (RUPs), you must run the latest version (available via Patch 17537119) of the EBS Technology Codelevel Checker (ETCC). Use the command `checkDBpatch.sh`

Apply the missing techstack patches as reported by ETCC

Please follow the following document to have an idea on how to apply patches to various techstack layers:

Oracle E-Business Suite 12.2 Patching Technology Components Guide (Doc ID 1355068.1)

You may face issues with security patching and overlay patches. The following notes will help clear your concepts on overlay patching, rollbacks and help you apply the correct ones:

Database Patch Set Update Overlay Patches Required for Use with PSUs and Oracle E-Business Suite (Doc ID 1147107.1)

Announcing Oracle WebLogic Server PSUs (Patch Set Updates) (Doc ID 1306505.1)

Master Note on WebLogic Server Patch Set Updates (PSUs) (Doc ID 1470197.1)

Apply the latest AD and TXK Patches

Applying the Latest AD and TXK Release Update Packs to Oracle E-Business Suite Release 12.2 (Doc ID 1617461.1)

Cloning of R12.2

The following document covers the concept of E-Business 12.2 Cloning in clear terms.

Cloning Oracle E-Business Suite Release 12.2 (AD-TXK Delta 6 or Lower Codelevel) with Rapid Clone (Doc ID 2047809.1)

Cloning Oracle E-Business Suite Release 12.2 RAC Enabled Systems with Rapid Clone (Doc ID 1679270.1)

Advanced cloning options like refreshing a target system, cloning multi-node system, adding/deleting a new application tier, adding/deleting a node from an existing RAC cluster are also discussed in the above documents.

Adding a Load Balancer

I tried configuring Zen Load Balancer for my home lab. It is a well-developed software Load balancer.

<https://www.zenloadbalancer.com/>

Oracle has come up with Oracle Traffic Director as the new software load balancer:

<http://www.oracle.com/us/products/middleware/application-server/oracle-traffic-director-ds-1389582.pdf>

SSL Configuration

Try using Verisign CA to get a 30 day trial certificate to test out SSL configurations in home lab.

For forms, with newer java versions, self-signing of JARs is restricted and you need to purchase code signing certificates with OCSP and CRL capabilities.

Oracle Identity Management Integration with E-Business Suite R12.2

Release 12.2 can be integrated with Oracle Unified Directory. This is a lightweight directory using Berkeley DB. Very easy to install and make it running. There are a few challenges with ACL and Groups during configurations. One of my colleagues (Saroj) has written an e-book that can help in configuring OUD and OAM 11g with EBS 12.2:

<https://www.amazon.com/Oracle-Single-Sign-12-2-11-1-2-3-ebook/dp/B01CTWJ2F0>

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