IE2080
Database Systems Administration
2nd Year, 1st Semester

Assignment

Assignment – Part 2

Submitted to

Sri Lanka Institute of Information Technology

In partial fulfillment of the requirements for the

Bachelor of Science Special Honors Degree in Information Technology

30/04/2019

I certify that this report does not incorporate without acknowledgement, any material previously submitted for a degree or diploma in any university, and to the best of my knowledge and belief it does not contain any material previously published or written by another person, except where due reference is made in text.

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Screenshots of Installing Oracle 12c on CentOS 7

1. Open the Oracle installer by giving code: */stage/database/runInstaller (fig: 1)*

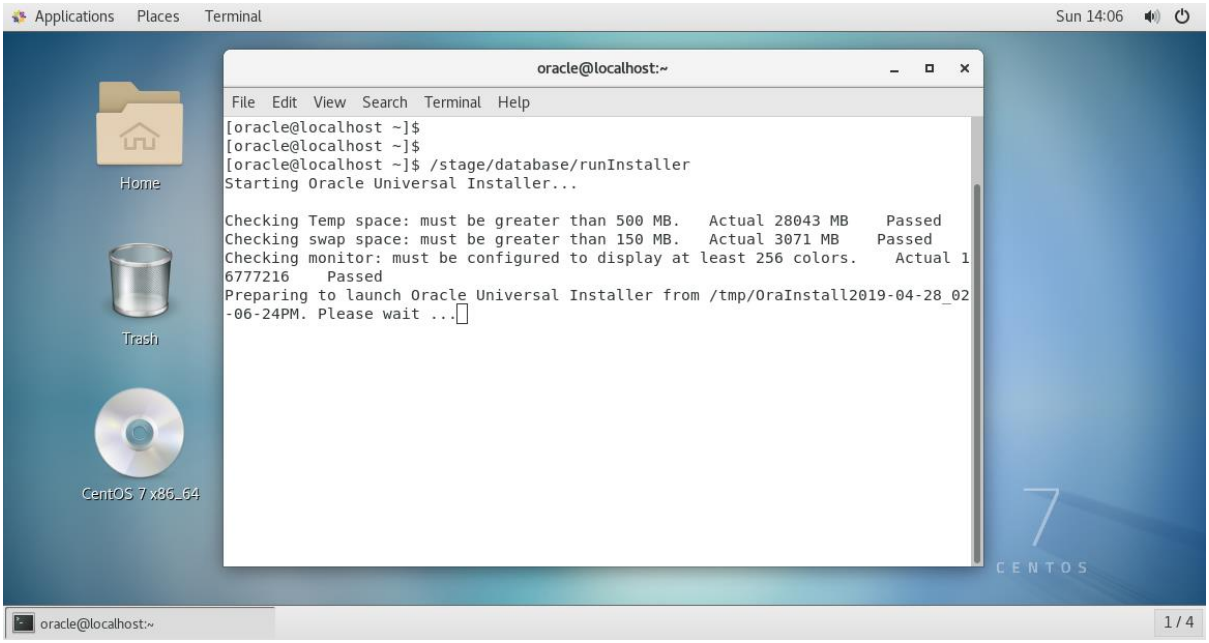

Fig: 1

2. Loading Oracle Installer (fig:2)

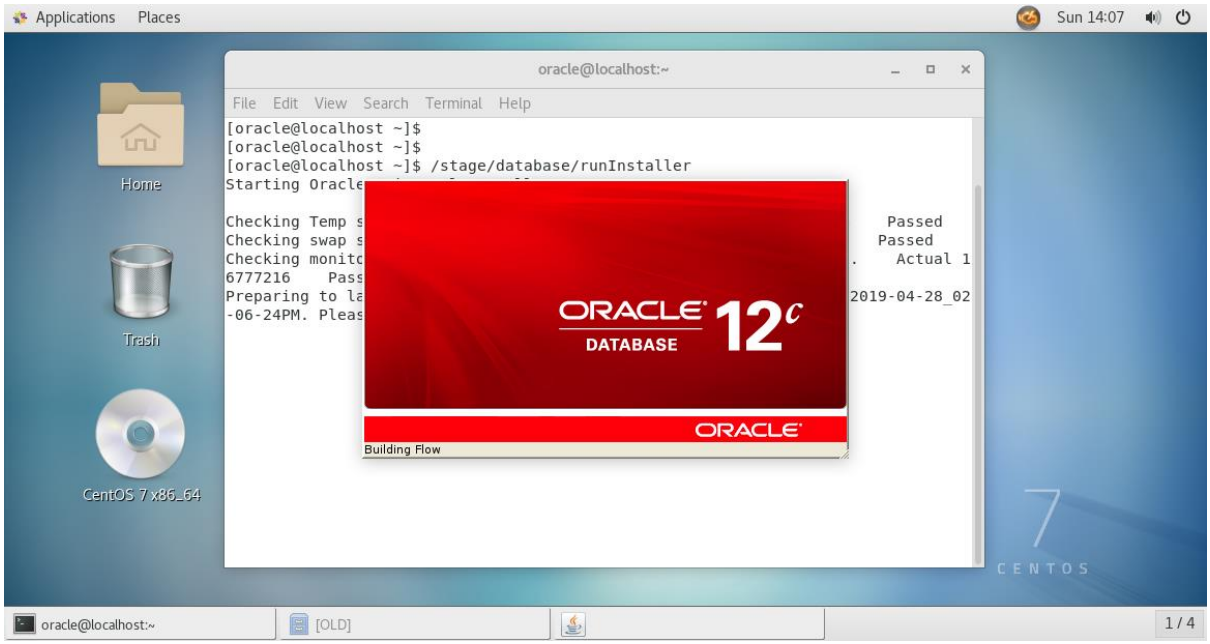

Fig: 2

3. Enter the email address associated with your Oracle account. It is optional. (fig: 3)

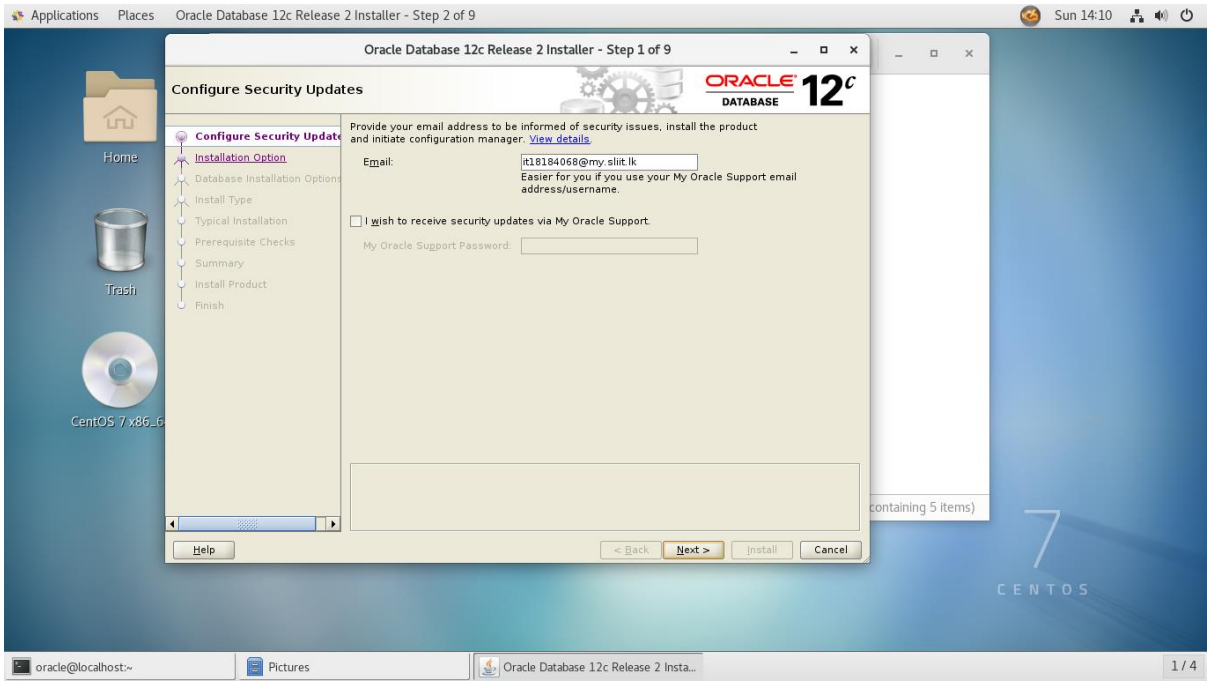

Fig: 3

If you want can give next without entering a email.

4. Choose **Create and Configure a Database** (fig: 4)

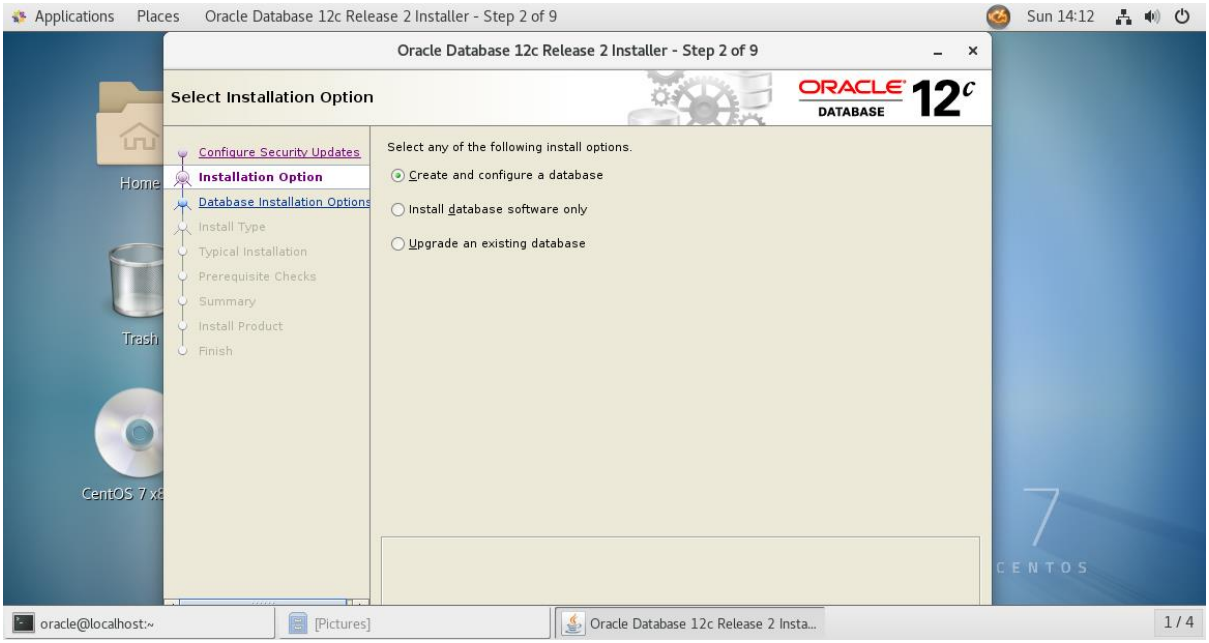

Fig: 4

5. Select **Desktop Class** since we are setting up a minimal configuration and a starter database. (fig: 5)

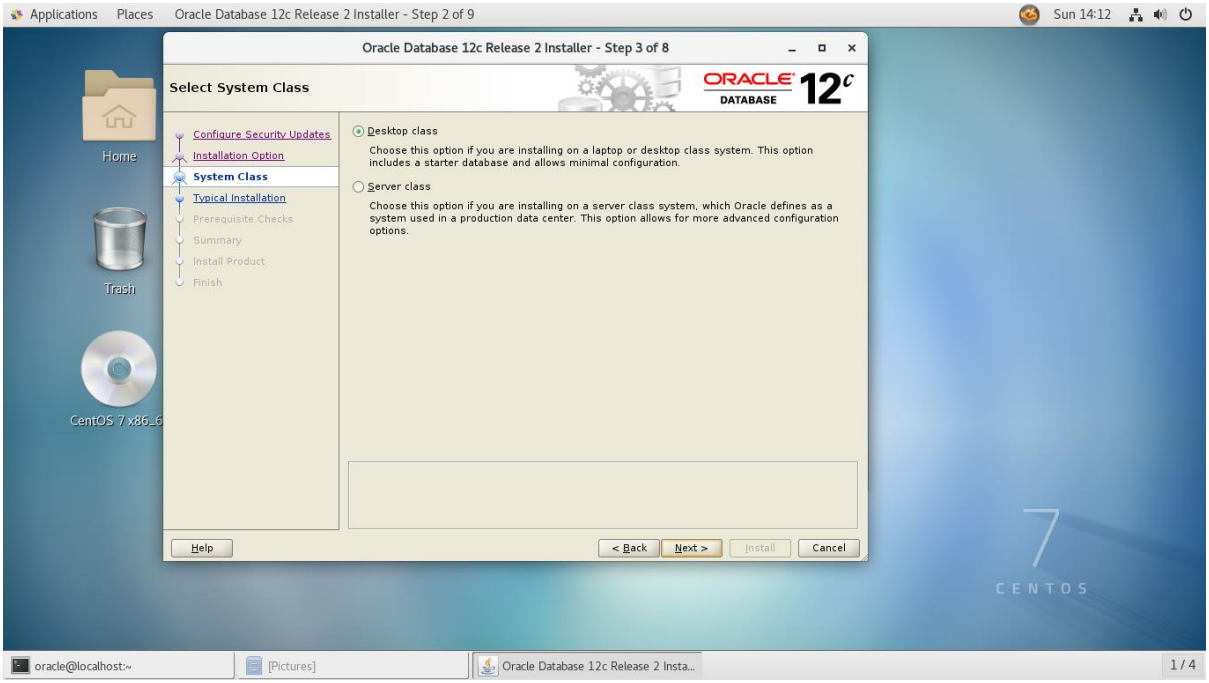

Fig: 5

6. Select the following options for typical configuration (fig: 6)

- Oracle base: **/u01/app/oracle**
- Software location: **/u01/app/oracle/product/12.2.0/dbhome_1**
- Database file location: **/u02**
- OSDBA group: **dba**
- Global database name: **DSAORCL**
- Password: **Oracle123** (You can give any password)
- Check Create as Container database to create pluggable database
- Pluggable database name: **DSAPDB**
- **Keep others default**

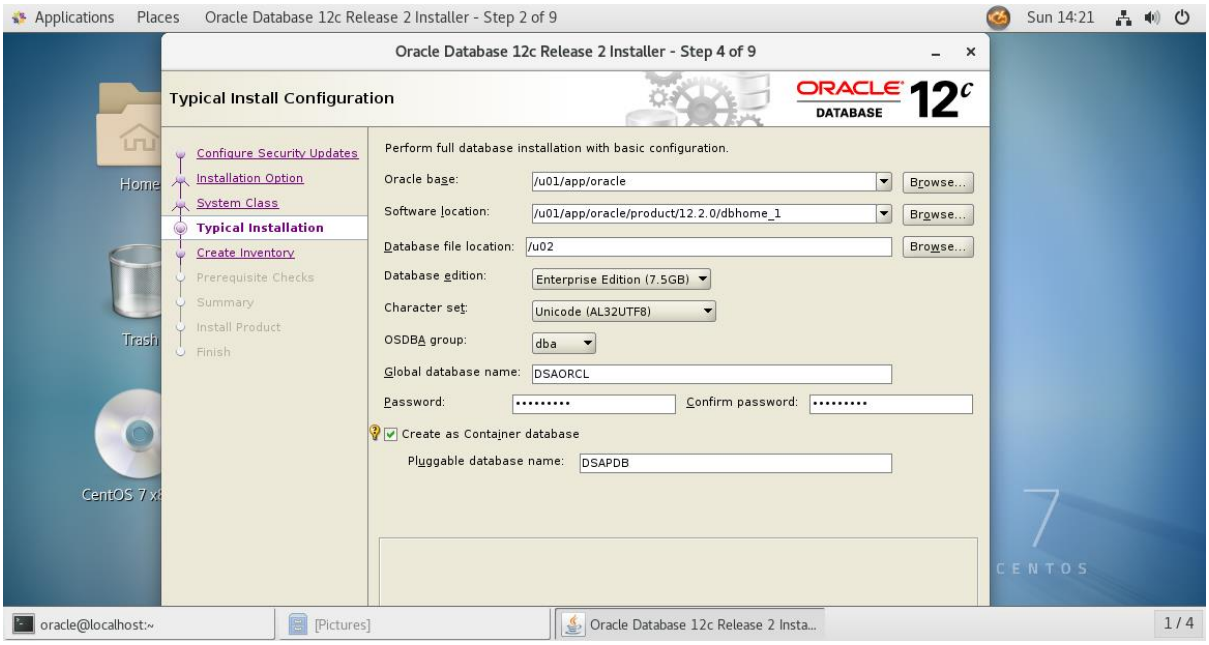

Fig: 6

7. Keep the default Inventory Directory as **/u01/app/oraInventory** (fig:7)

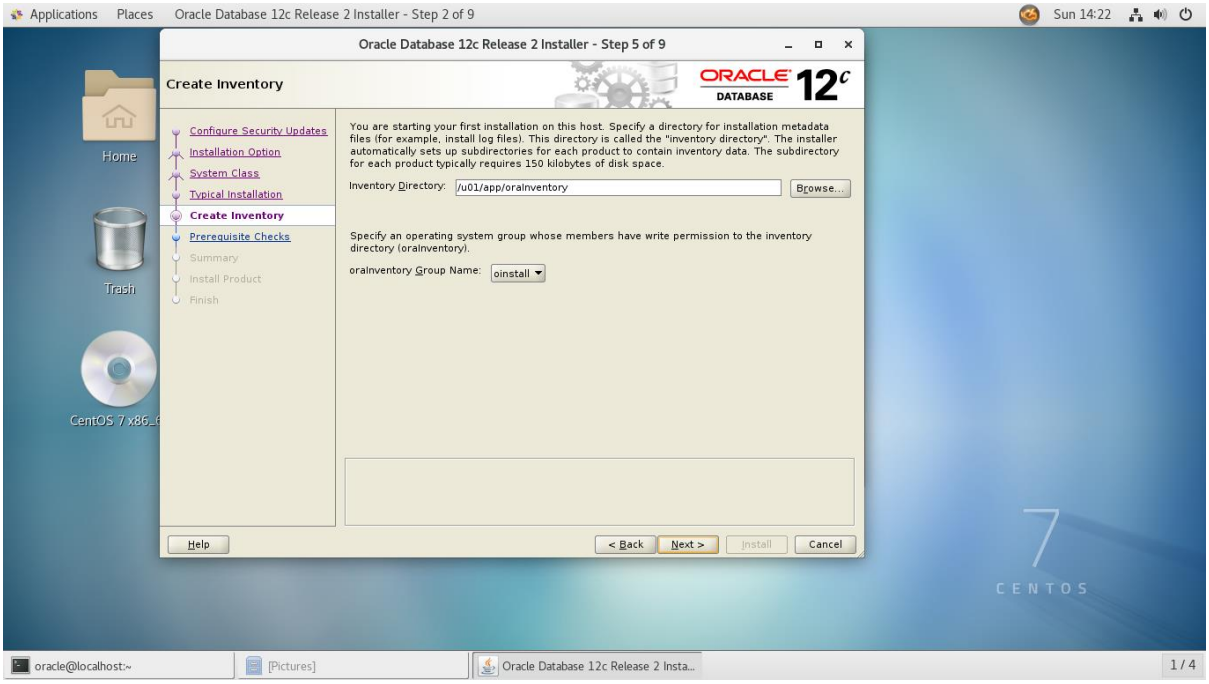

Fig: 7

8. Verify that the installation pre-checks are completed without errors. However, when I installing I had some errors and included in this report.
    - **Soft limit: maximum stack size** (fig: 8)

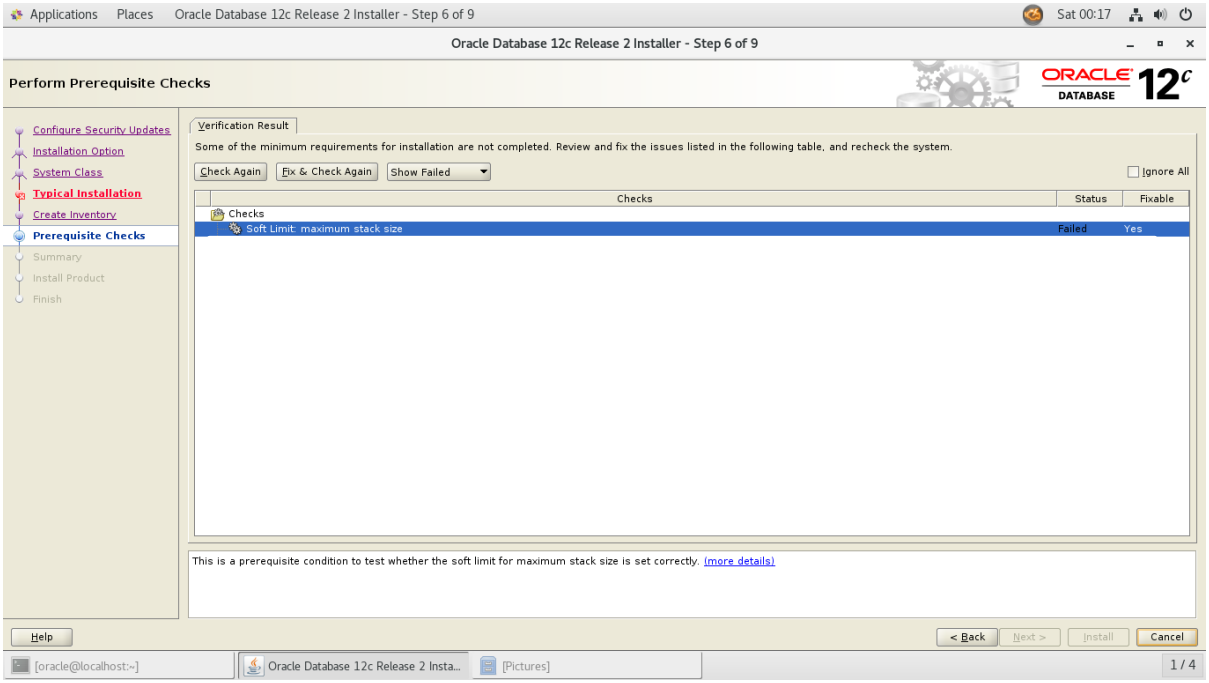

Fig: 8

- Click the error and click more details (fig: 9)

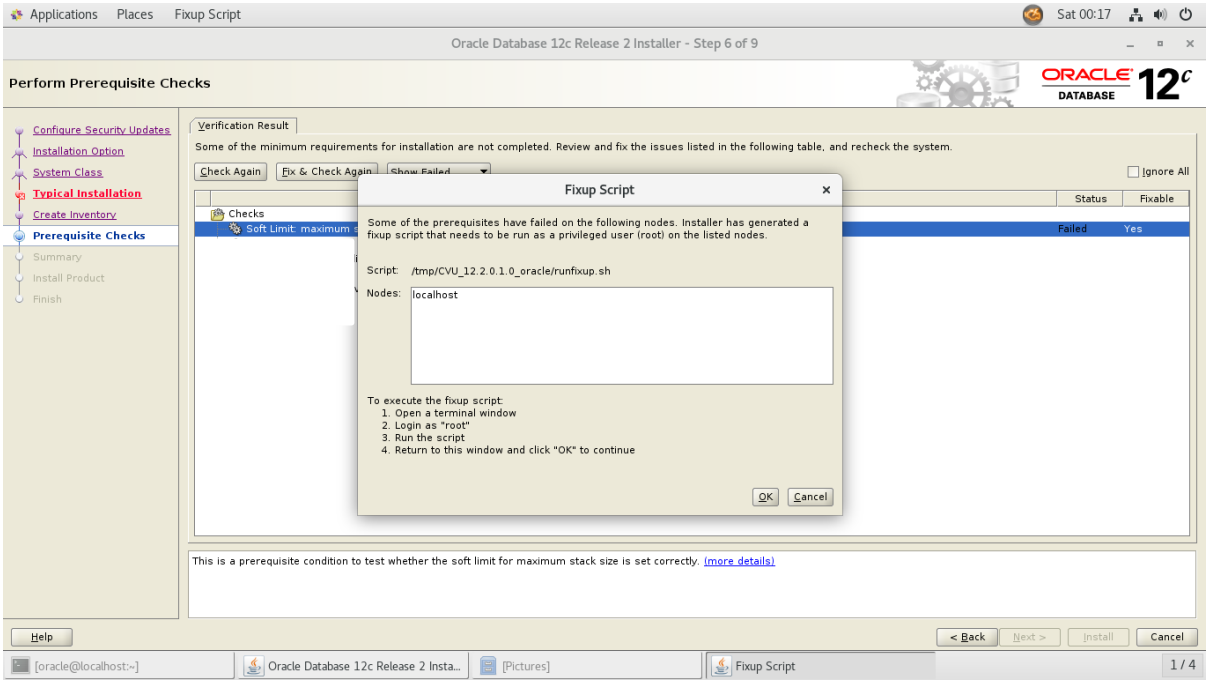

Fig: 9

- Now open a terminal and login as a root, then run the script:

Script: **/tmp/CVU_12.2.0.1.0_oracle/runfixup.sh**

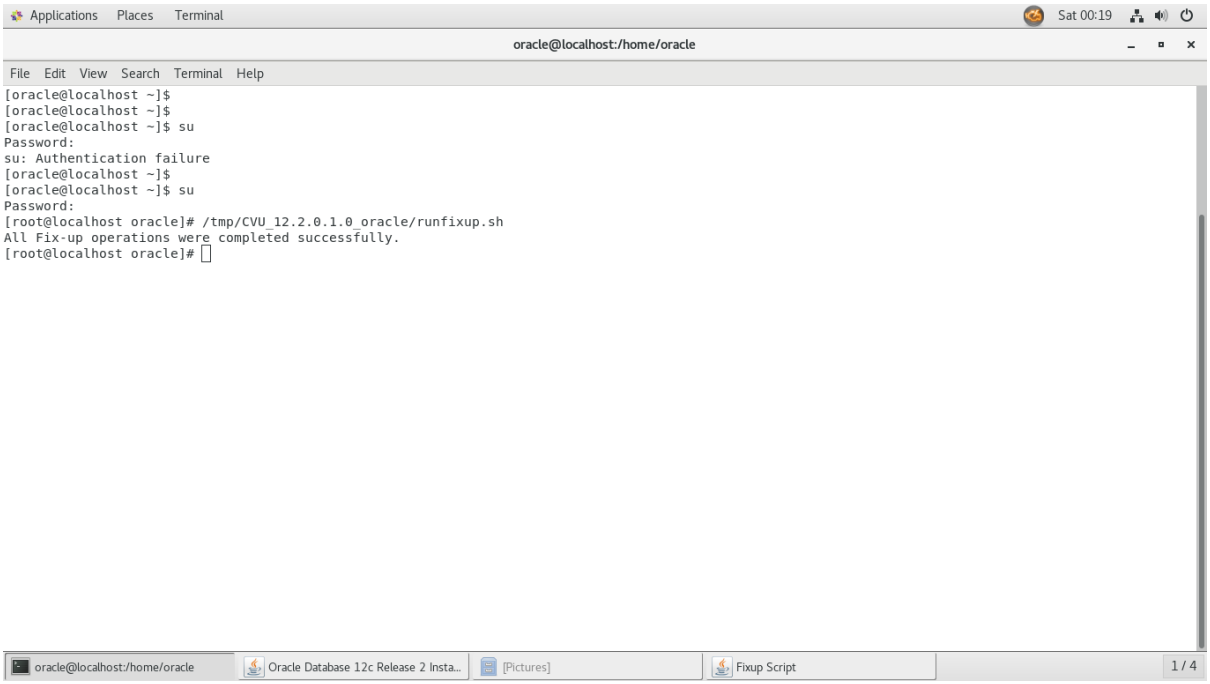

Fig: 10

- Now click **ok** and click **check again** (fig: 11)

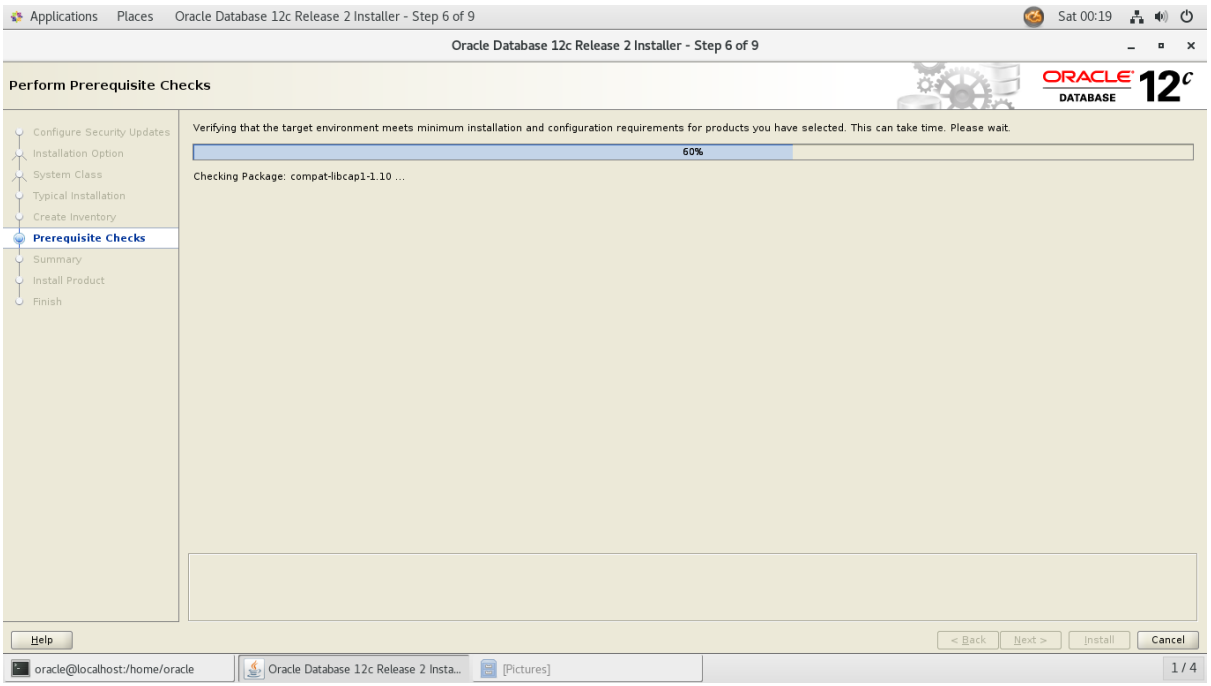

Fig: 10

- If you come across the same errors again then close the installer, restart the machine, and again do the above steps.
- Check the summary thoroughly before going to install product step (fig: 11)

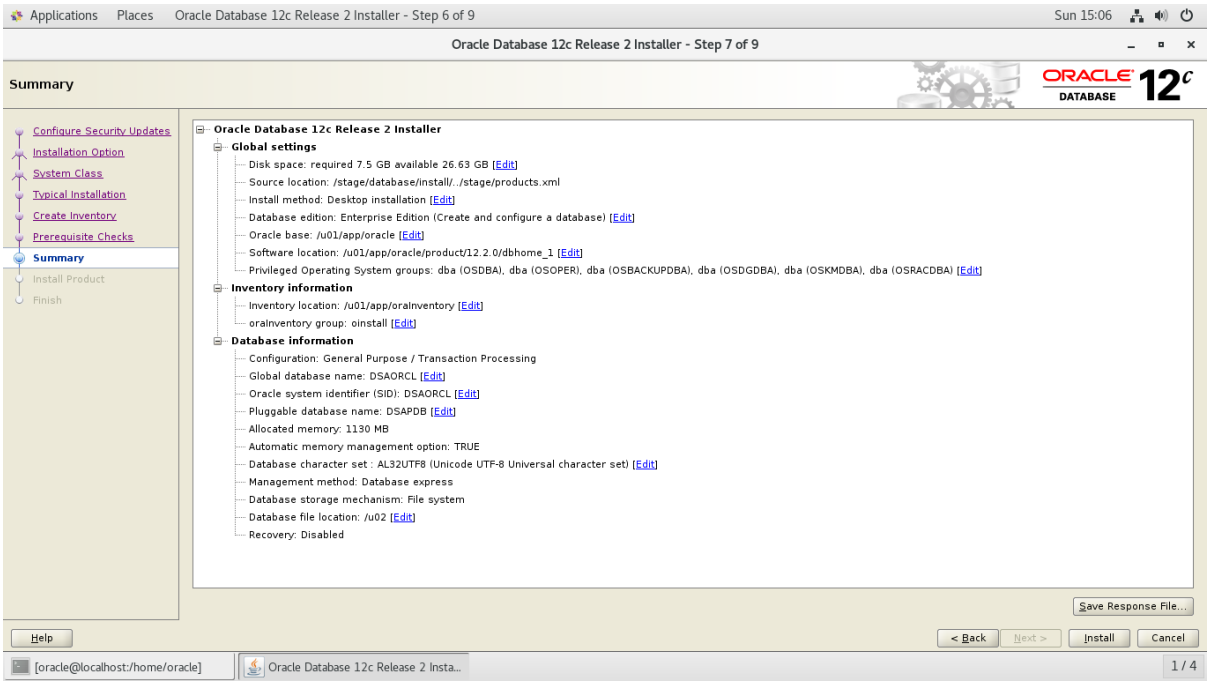

Fig: 11

9. Wait until the oracle installation process completes (fig: 12)

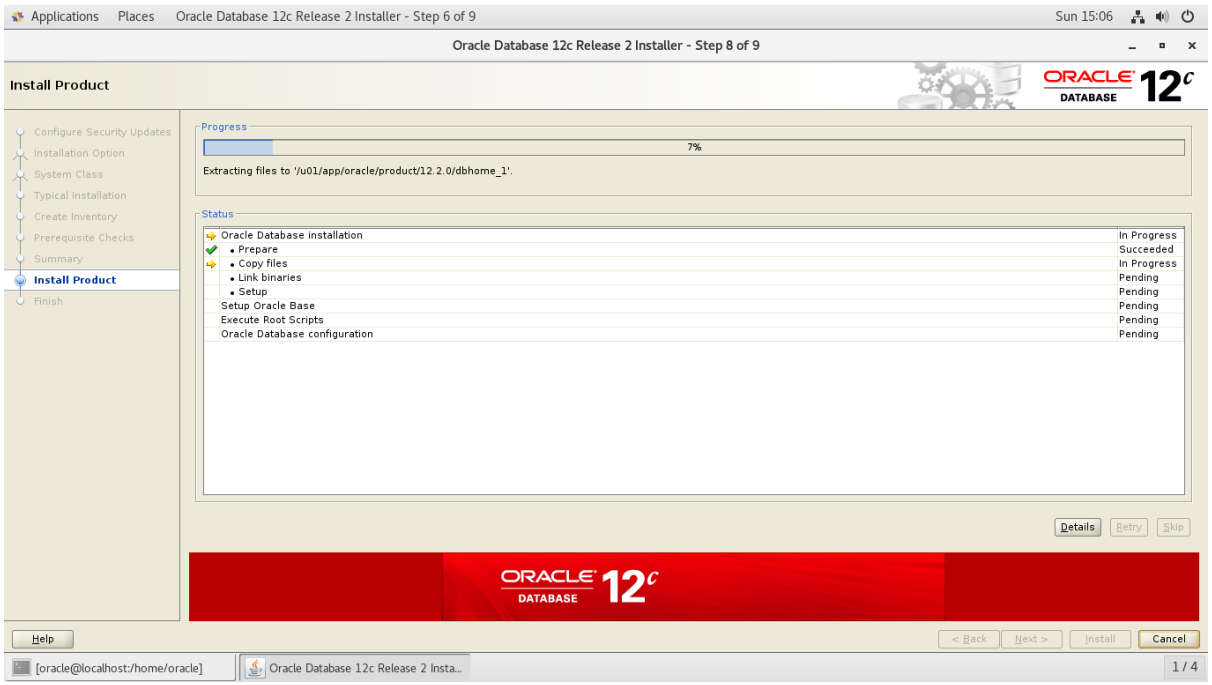

Fig: 12

10. Sometimes during installation you will be asked to run couple of scripts to setup further permission or to fix errors. It is illustrated below (fig: 13)

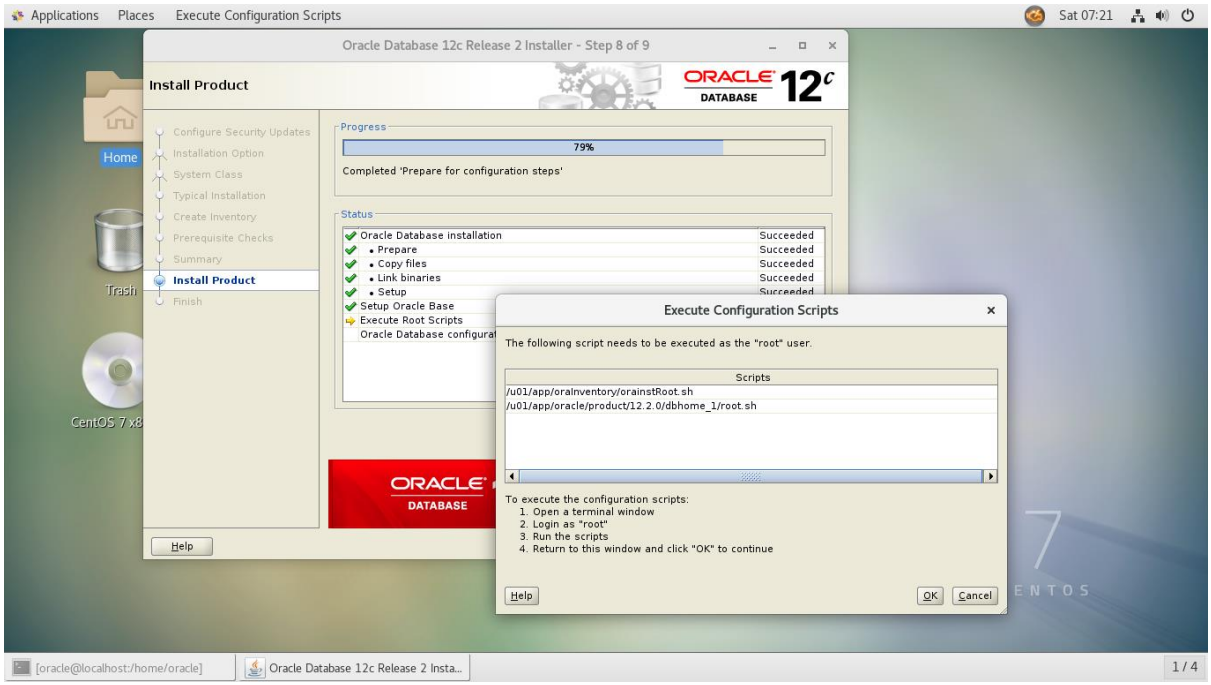

Fig: 13

11. Open terminal and run below scripts as root

- Script: **/u01/app/oraInventory/orainstRoot.sh** (fig: 14)
- Script: **/u01/app/oracle/product/12.2.0/dbhome_1/root.sh** (fig: 15)

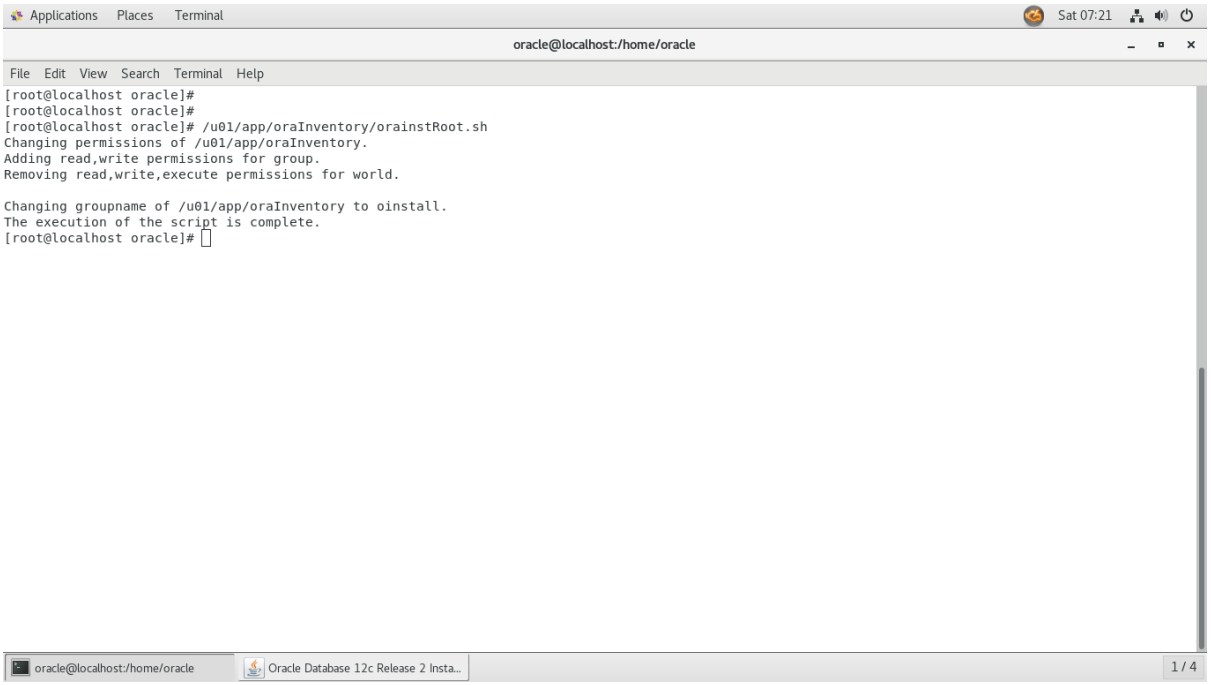

Fig: 14

- Press Enter at [/usr/local/bin]:
- Enter no for - yes | [no]

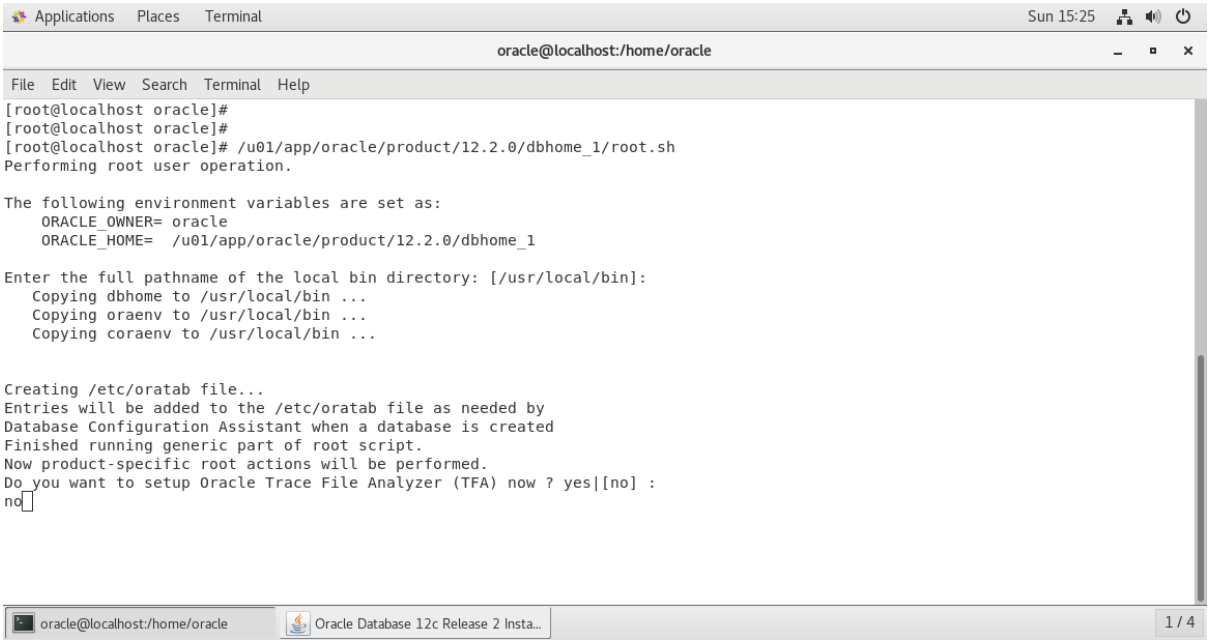

Fig: 15

- After that click **ok** and continue the installation

12. Click **close** and exit from the installer (fig: 16)

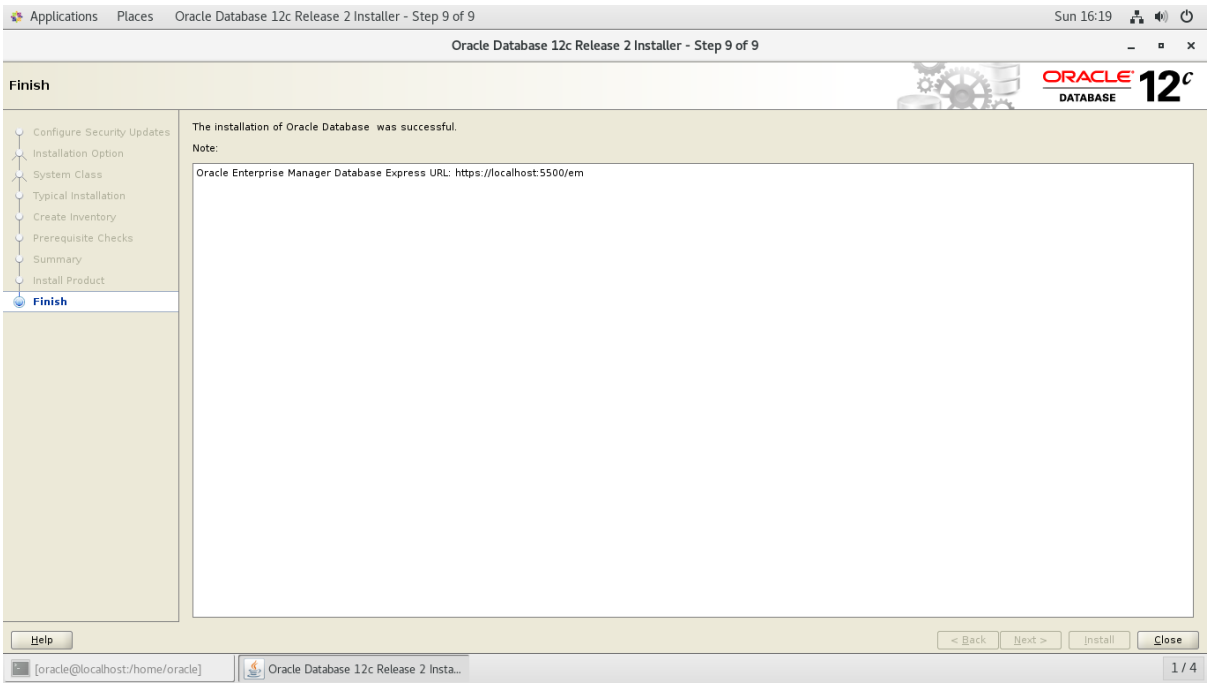

Fig: 16

Screenshot of Oracle 12c Finishing Touches

1) To allow connections from outside the server, you will need to open the following ports (fig: 17 and fig: 18):
    - 1521/TCP, 5500/TCP, 5520/TCP, 3938/TCP

By giving commands:
firewall-cmd --zone=public --add-port=1521/tcp --add-port=5500/tcp --add-port=5520/tcp --add-port=3938/tcp –permanent

firewall-cmd –reload

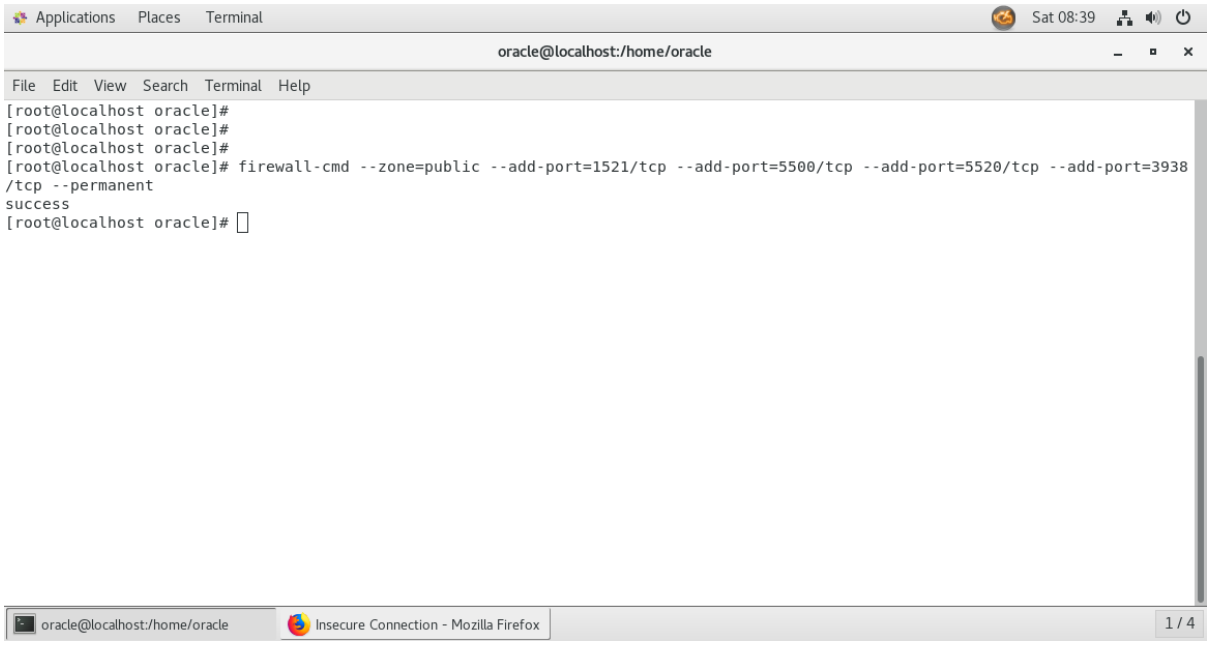

Fig: 17

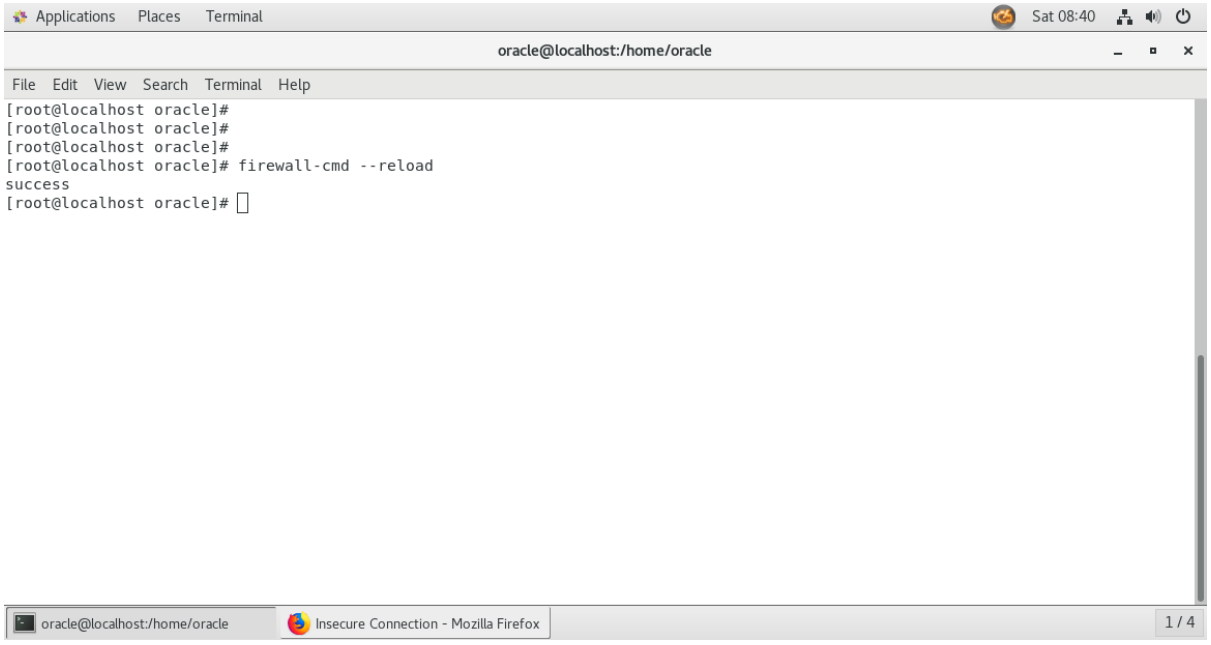

Fig: 18

- List active ports (fig: 19):
  Command: ***firewall-cmd --list-ports***

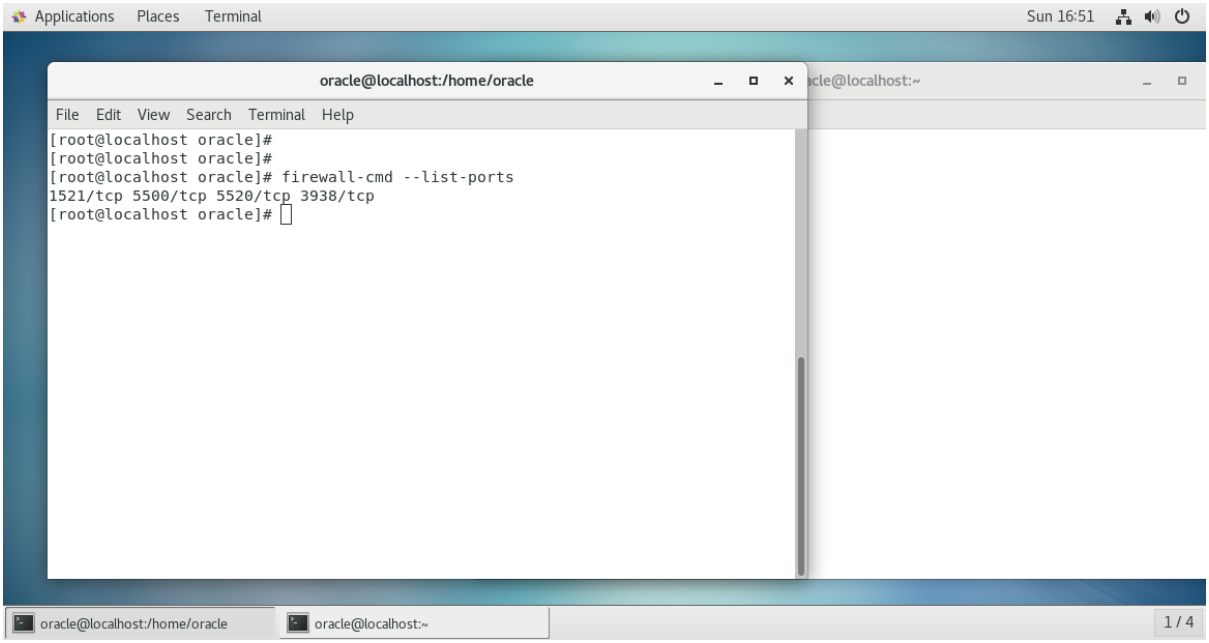

Fig: 19

2) Login as oracle user and add the following values to the /home/oracle/.bash_profile (fig: 20).

   Command: ***vi /home/oracle/.bash_profile***

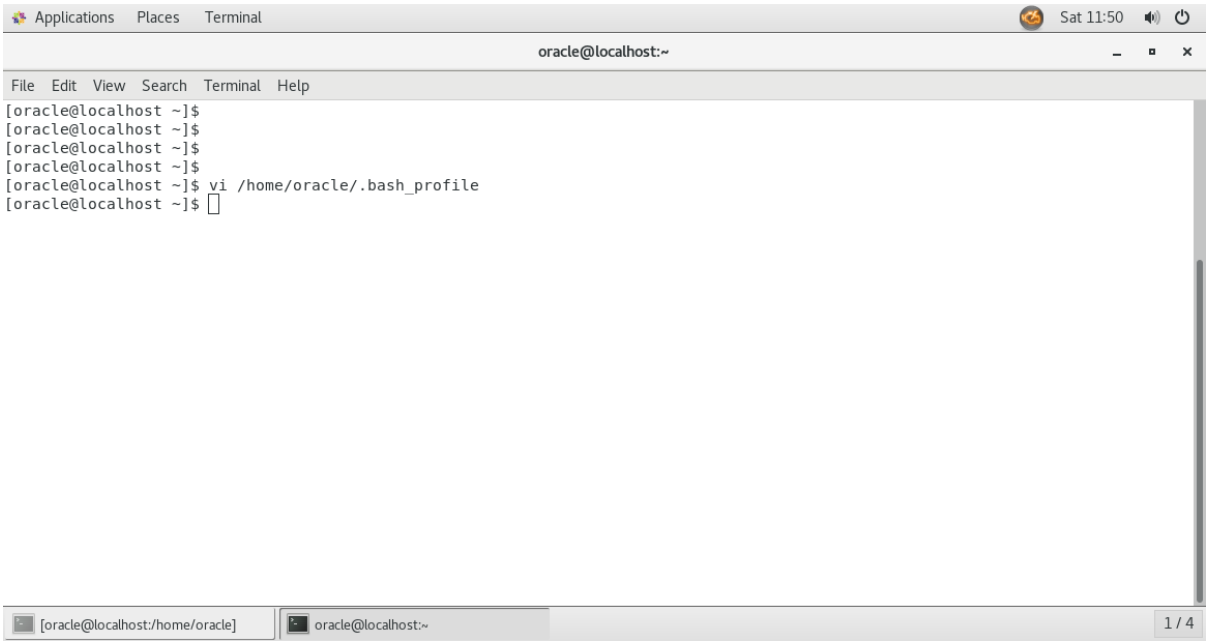

Fig: 20

- Add values to vi editor (fig:20):

Fig: 21

- Exit by saving. (:wq!).

3) Reload the bash_profile to apply the new settings (fig: 22):
    - Command: ***. .bash_profile***
    - Command: ***source .bash_profile***
    - ***Use one from above***

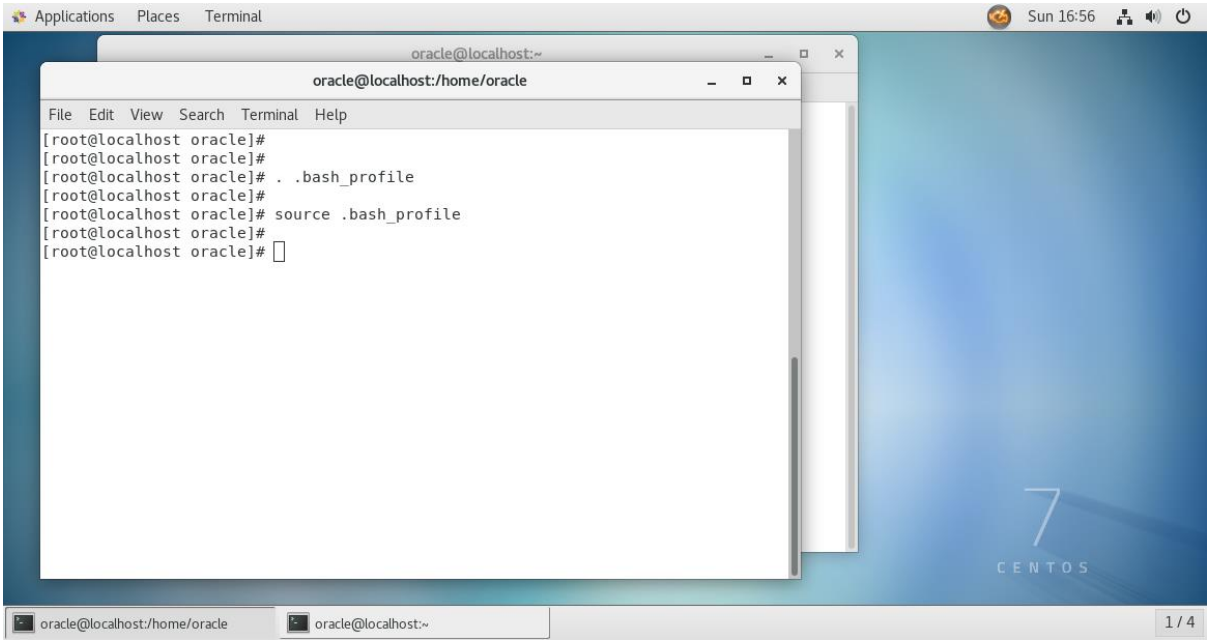

Fig: 22

Screenshots of enabling Oracle to Start on System Boot

1. To enable the database service to start automatically on boot, add the following lines to /etc/systemd/system/oracle-rdbms.service file.
    - Open oracle-rdbms.service file using vi editor (fig: 24)
    - Add following values in fig: 23 to oracle-rdbms.service (fig: 25)

```
2.  file# /etc/systemd/system/oracle-rdbms.service
3. # Invoking Oracle scripts to start/shutdown Instances defined in
   /etc/oratab
4. # and starts Listener
5.
6. [Unit]
7. Description=Oracle Database(s) and Listener
8. Requires=network.target
9.
10.  [Service]
11.  Type=forking
12.  Restart=no
13.  ExecStart=/u01/app/oracle/product/12.2.0/dbhome 1/bin/dbstart
   /u01/app/oracle/product/12.2.0/dbhome_1
14.  ExecStop=/u01/app/oracle/product/12.2.0/dbhome_1/bin/dbshut
   /u01/app/oracle/product/12.2.0/dbhome_1
15.  User=oracle
16.
17.  [Install]
18.  WantedBy=multi-user.target
```

Fig: 23

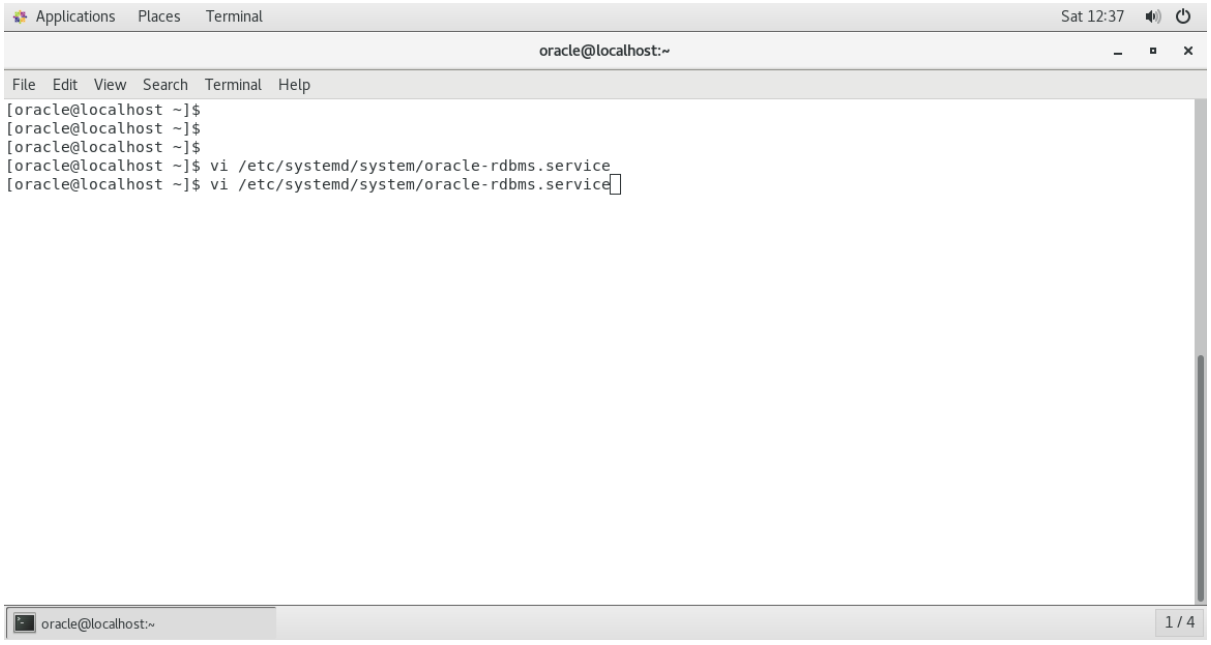

Fig: 24

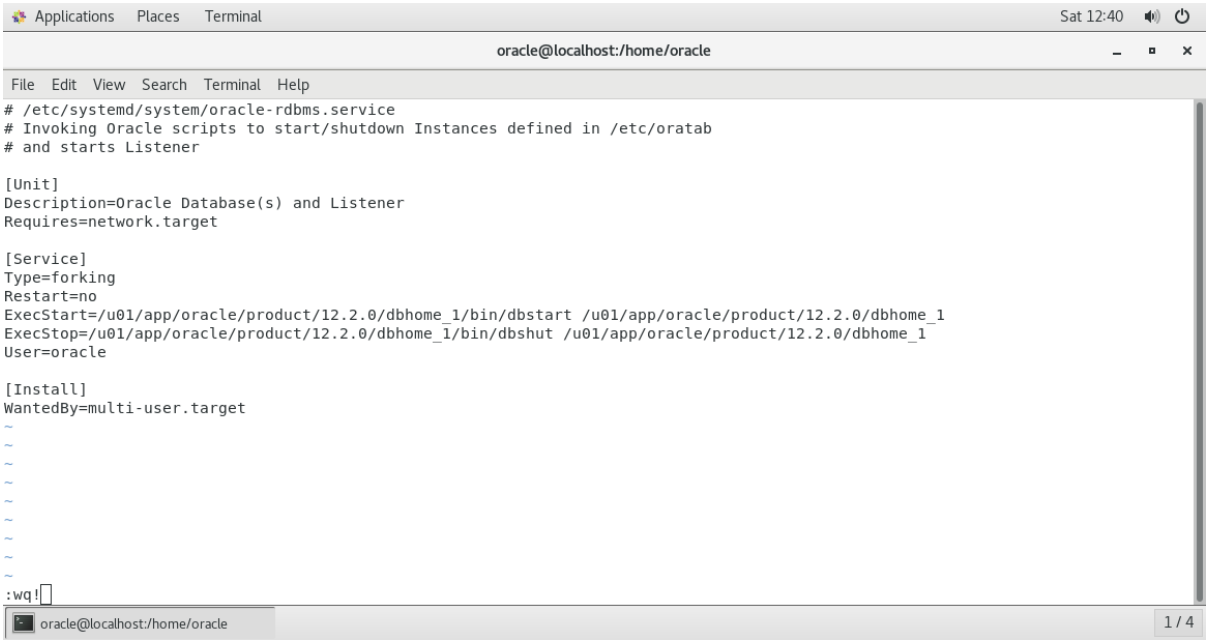

Fig: 25

- After the /etc/systemd/system/oracle-rdbms.service creation. Run below commands (fig: 26).

  Command: ***systemctl daemon-reload***
  Command: ***systemctl enable oracle-rdbms***

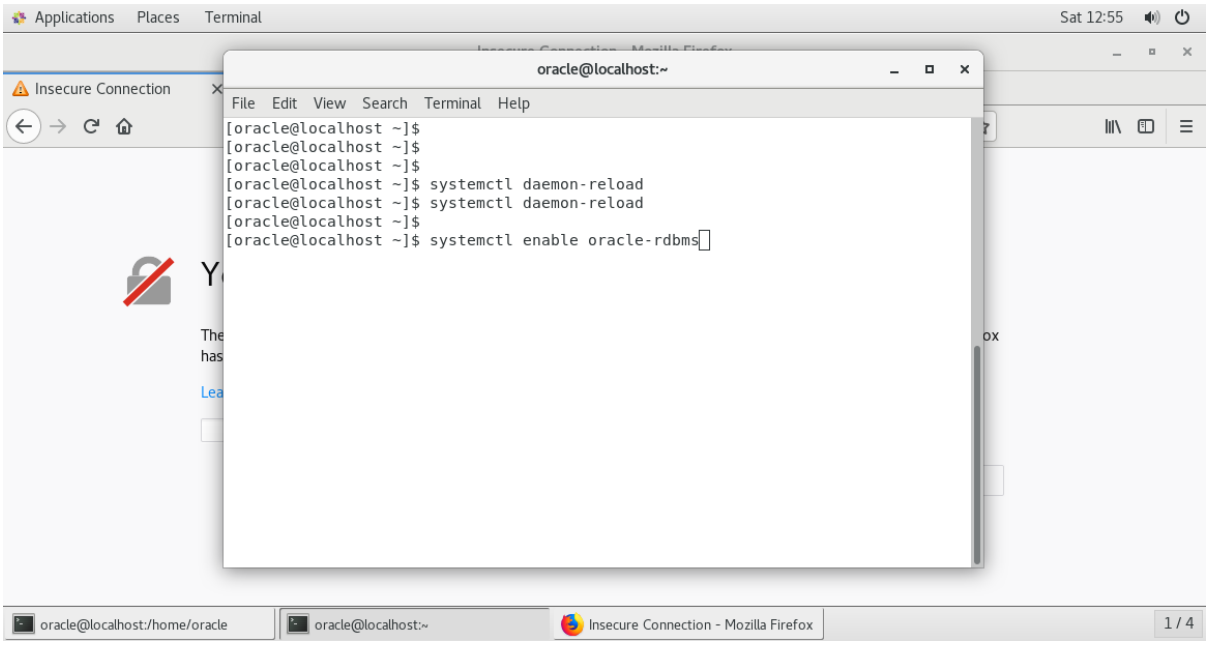

Fig: 26

2. Finally, we need to indicate that the DSAORCL database should be brought up during boot in /etc/oratab (Y: Yes) (fig: 27).

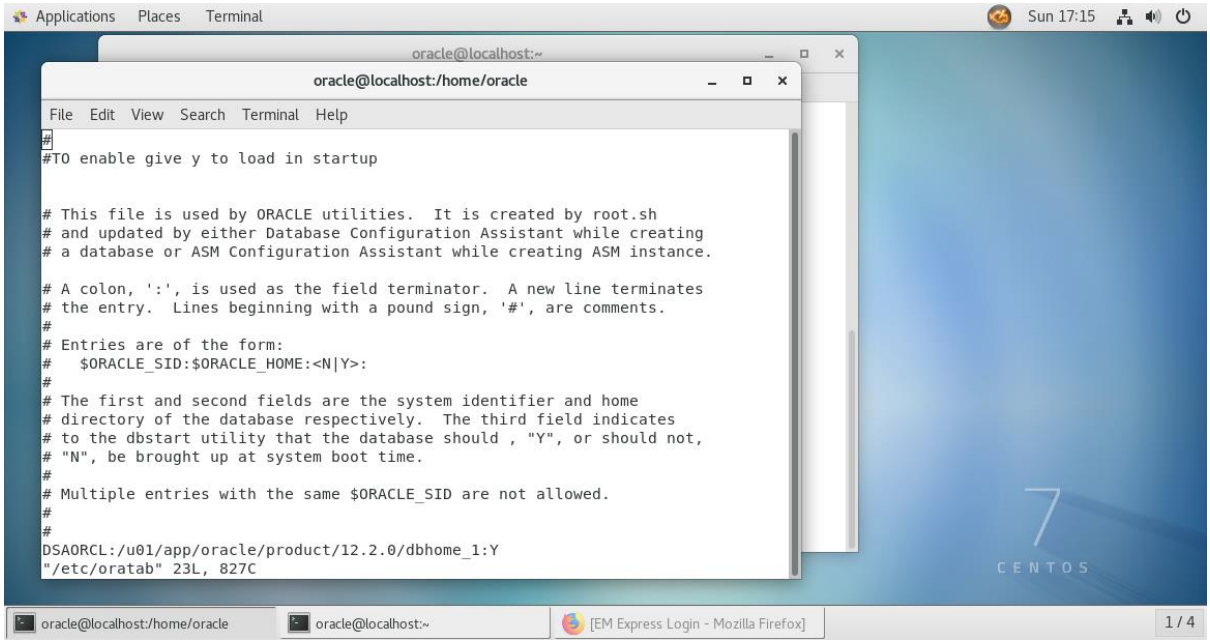

Fig: 27

Screenshot

1. Set a password for SYS and SYSTEM users (fig: 28)
    - Loggin as sysdba. Command: ***sqlplus / as sysdba***
    - *Alter accounts an set passwords*

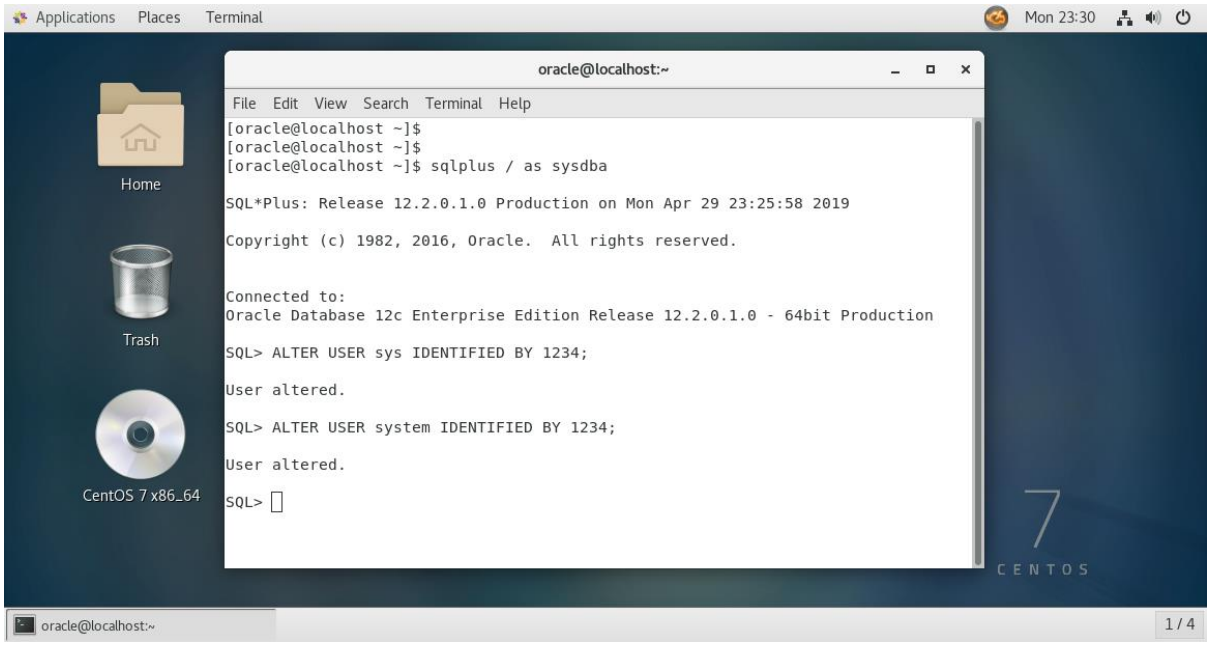

Fig: 28

2. Commands(Fig: 29):

SQL> ***SELECT name,cdb,con_id from v$database;***

SQL> ***SELECT instance_name,status,con_id from v$instance;***

SQL> ***SELECT dbms_xdb_config.gethttpsport from dual;***

SQL> ***show parameter dispatcher;***

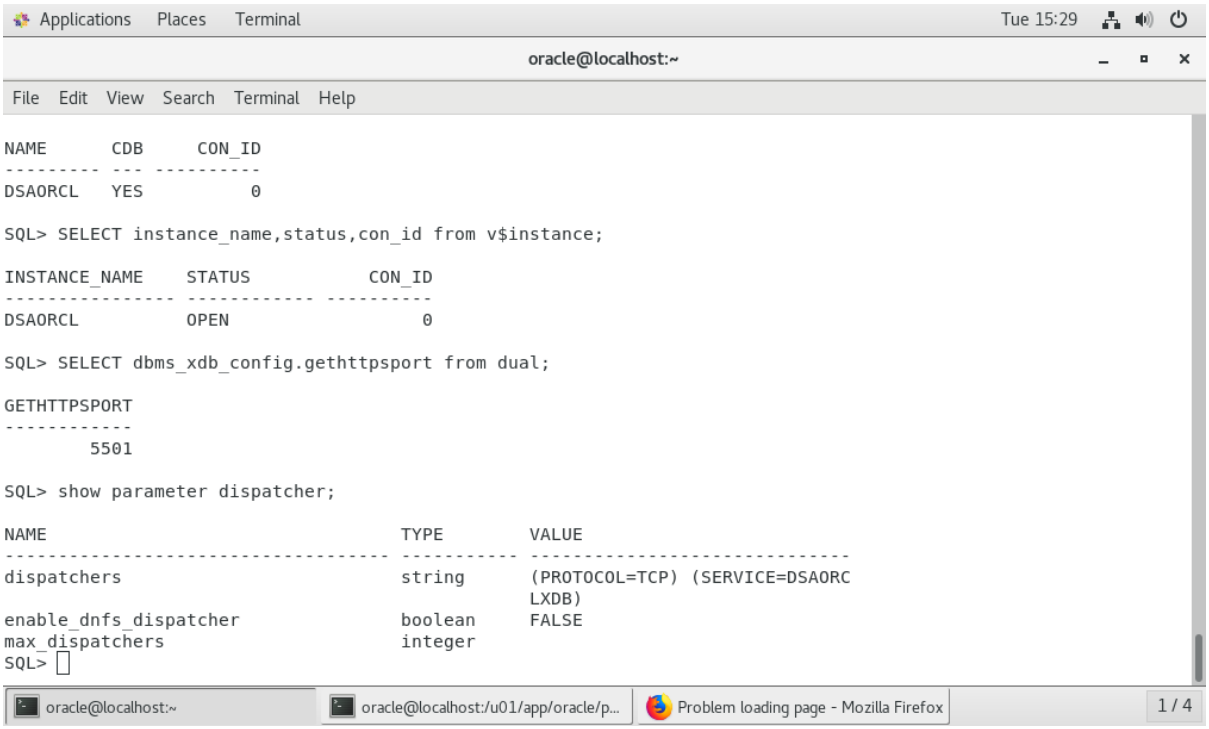

Fig: 29

Command: SQL> ***exec dbms_xdb_config.sethttpsport(5501);***

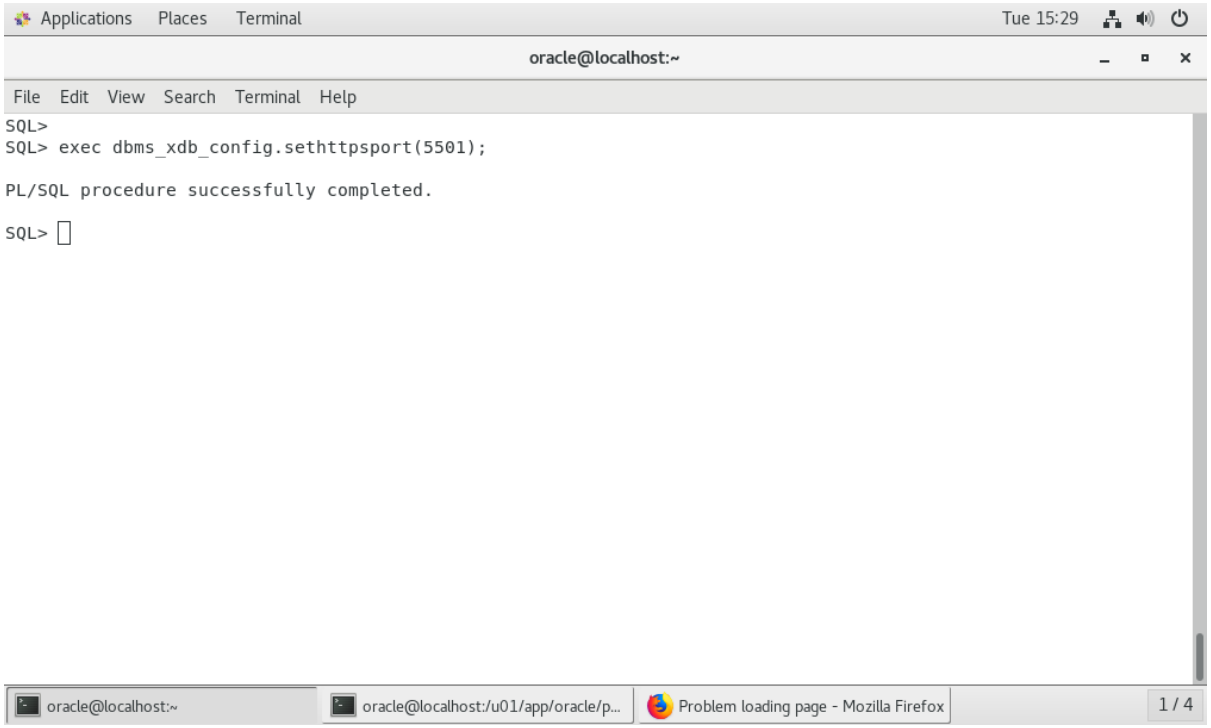

Fig: 30

Command: SQL> ***SELECT con_id,name,open_mode from v$pdbs;***

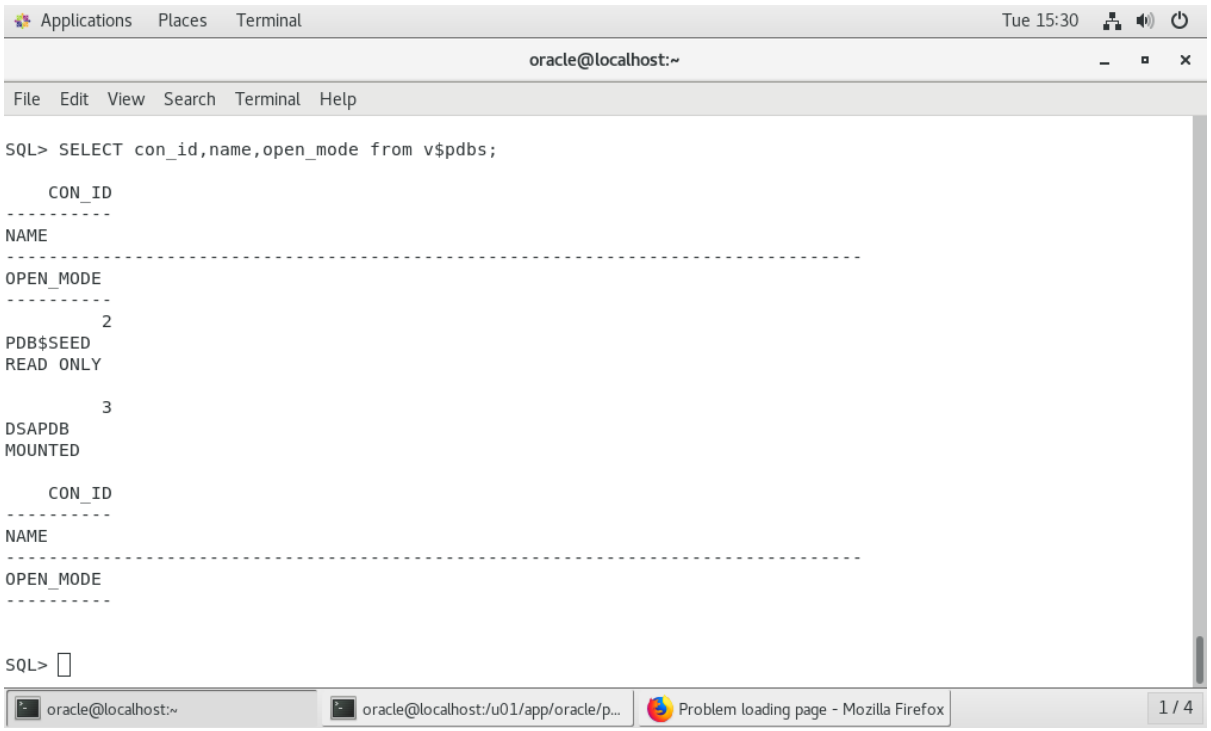

Fig: 31

Command: SQL> ***ALTER session set container=DSAPDB;***

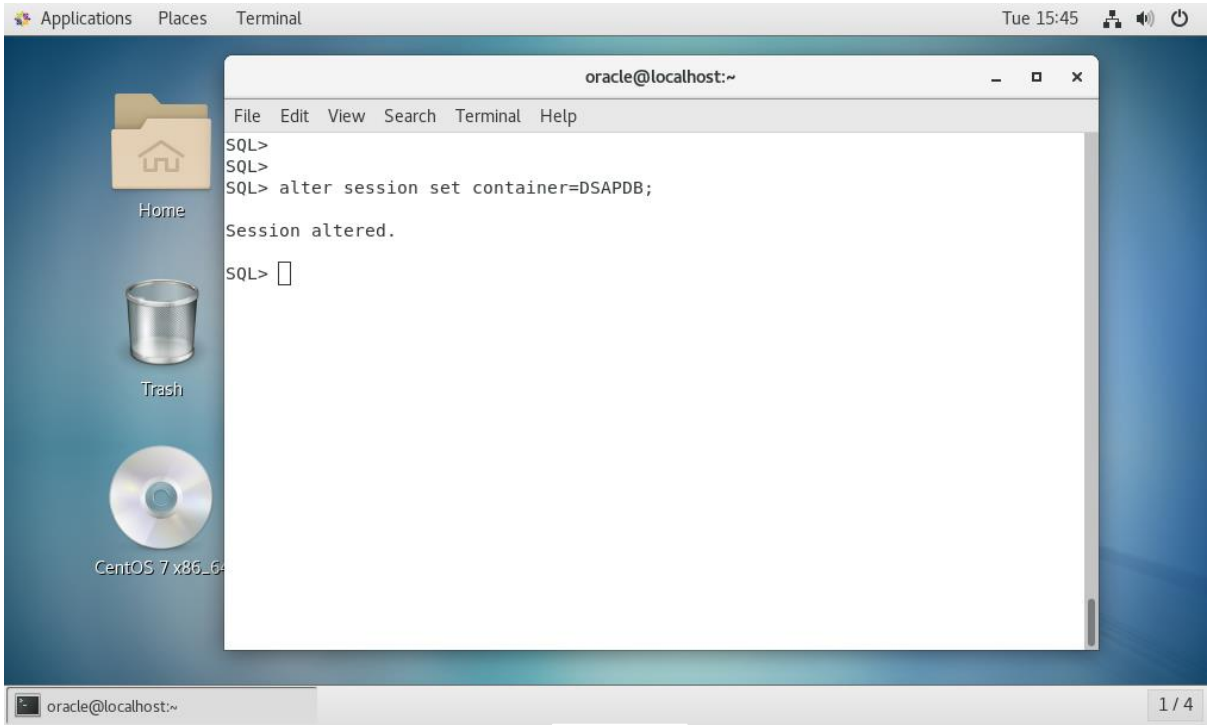

Fig: 32

Command: SQL> ***exec dbms_xdb_config.sethttpsport(5502);***

Command: SQL> ***SELECT dbms_xdb_config.gethttpsport from dual;***

Refferances

[1] How to Install Oracle Database 12c on RHEL/CentOS 7 [Online] Available - [https://www.tecmint.com/install-oracle-database-12c-on-centos-7/ (visited - 30/04/2019)]