

Nama : Loadtriani Oktavia S

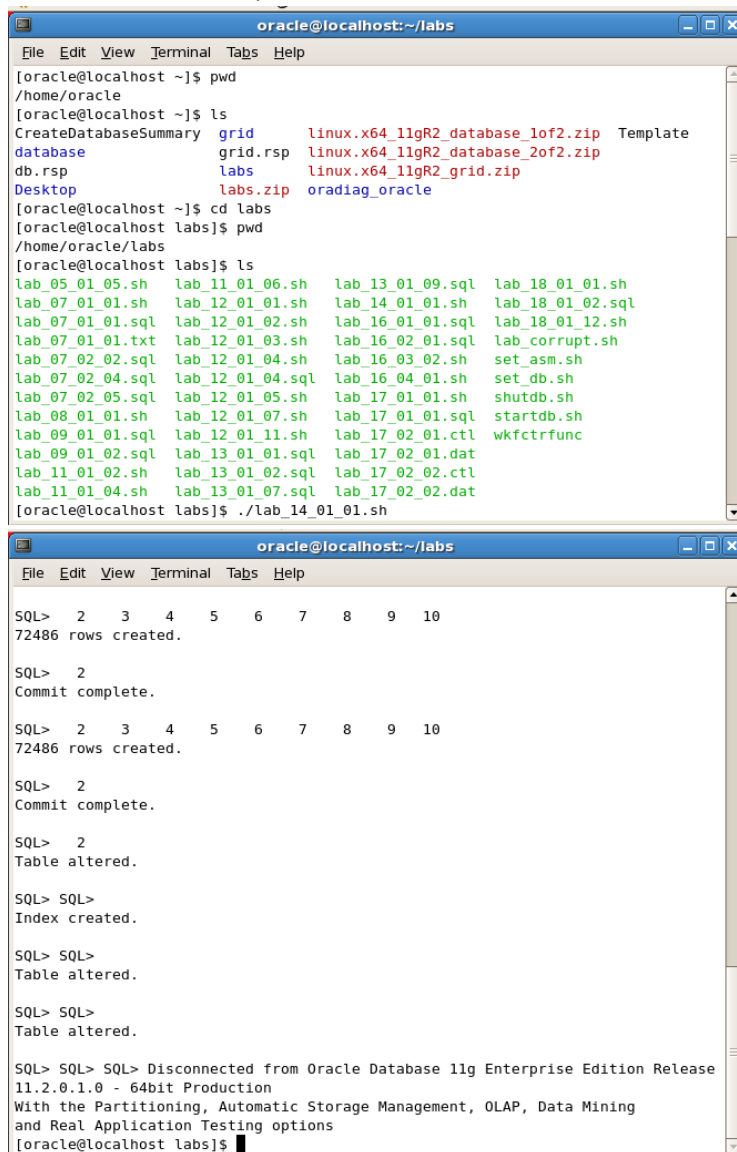
NIM : 215314172

## Practice 14-1

### Configuring Your Database for Recovery

Pada latihan ini, dilakukan konfigurasi pada database untuk melakukan

- 1) Jalankan script lab\_14\_01\_01.sh untuk membuat lebih banyak data yang dapat digunakan di skenario selama latihan. Script ini akan membuat table pada tablespace INVENTORY dan melakukan hal basic pada database.



```
oracle@localhost:~/labs
File Edit View Terminal Tabs Help
[oracle@localhost ~]$ pwd
/home/oracle
[oracle@localhost ~]$ ls
CreateDatabaseSummary  grid      linux.x64_11gR2_database_1of2.zip  Template
database              grid.rsp  linux.x64_11gR2_database_2of2.zip
db.rsp                labs      linux.x64_11gR2_grid.zip
Desktop               labs.zip  oradiag_oracle
[oracle@localhost ~]$ cd labs
[oracle@localhost labs]$ pwd
/home/oracle/labs
[oracle@localhost labs]$ ls
lab_05_01_05.sh  lab_11_01_06.sh  lab_13_01_09.sql  lab_18_01_01.sh
lab_07_01_01.sh  lab_12_01_01.sh  lab_14_01_01.sh  lab_18_01_02.sql
lab_07_01_01.sql  lab_12_01_02.sh  lab_16_01_01.sql  lab_18_01_12.sh
lab_07_01_01.txt  lab_12_01_03.sh  lab_16_02_01.sql  lab_corrupt.sh
lab_07_02_02.sql  lab_12_01_04.sh  lab_16_03_02.sh  set_asm.sh
lab_07_02_04.sql  lab_12_01_04.sql  lab_16_04_01.sh  set_db.sh
lab_07_02_05.sql  lab_12_01_05.sh  lab_17_01_01.sh  shutdb.sh
lab_08_01_01.sh  lab_12_01_07.sh  lab_17_01_01.sql  startdb.sh
lab_09_01_01.sql  lab_12_01_11.sh  lab_17_02_01.ctl  wkfctrfunc
lab_09_01_02.sql  lab_13_01_01.sql  lab_17_02_01.dat
lab_11_01_02.sh  lab_13_01_02.sql  lab_17_02_02.ctl
lab_11_01_04.sh  lab_13_01_07.sql  lab_17_02_02.dat
[oracle@localhost labs]$ ./lab_14_01_01.sh

SQL>  2  3  4  5  6  7  8  9  10
72486 rows created.

SQL>  2
Commit complete.

SQL>  2  3  4  5  6  7  8  9  10
72486 rows created.

SQL>  2
Commit complete.

SQL>  2
Table altered.

SQL> SQL>
Index created.

SQL> SQL>
Table altered.

SQL> SQL>
Table altered.

SQL> SQL> SQL> Disconnected from Oracle Database 11g Enterprise Edition Release
11.2.0.1.0 - 64bit Production
With the Partitioning, Automatic Storage Management, OLAP, Data Mining
and Real Application Testing options
[oracle@localhost labs]$
```

- 2) Melakukan verifikasi apakah memiliki setidaknya 2 control files untuk dilakukan redudansi

- a) Pada Enterprise Manager masuk sebagai DBA1 dan role SYSDBA pada oracle database.

Oracle Enterprise Manager 11g  
Database Control

Login

\* User Name:

\* Password:

Connect As:

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- b) Pilih server kemudian masuk pada control files (pada bagian Storage)

Database Instance: orcl.example.com

Home Performance Availability Server Storage

Storage

[Control Files](#)

[Tablespaces](#)

[Temporary Tablespace Groups](#)

[Datafiles](#)

[Rollback Segments](#)

[Redo Log Groups](#)

[Archive Logs](#)

[Disk Groups](#)

[Migrate to ASM](#)

[Make Tablespace Locally Managed](#)

pertanyaan 1 : pada control files dibagian halaman general ada berapa banyak control file yang dimiliki?

Database Instance: orcl.example.com > Logged in as

Control Files

General Advanced Record Section

Control File Mirror Images

Oracle strongly recommends that your database has a minimum of two control files and that they are located on separate disks. If a control file is damaged due to a disk failure, you can restore it using the intact copy of the control file from the other disk. You can specify their location in the database's initialization parameter file.

Valid	File Name	File Directory
VALID	current.260.11491.77161	+DATA/orcl/controlfile/
VALID	current.256.11491.77165	+FRA/orcl/controlfile/

General Advanced Record Section

- 3) Melakukan resensi untuk fast recovery area configuration dan ubah menjadi 8 GB

- a) Pada Enterprise Manager pilih Availability kemudian masuk pada recovery settings pada Setup section.

Database Instance: orcl.example.com

Home Performance Availability Server Schema Data Movement Software and Support

[High Availability Console](#)

Backup/Recovery

Setup

[Backup Settings](#)

[Recovery Settings](#)

[Recovery Catalog Settings](#)

Manage

[Schedule Backup](#)

[Manage Current Backups](#)

[Backup Reports](#)

[Manage Restore Points](#)

[Perform Recovery](#)

[View and Manage Transactions](#)

b) Kemudian gulir sampai ke halaman bawah

**Flash Recovery**

This database is using a flash recovery area. The chart shows space used by each file type that is not reclaimable by Oracle. Performing backups to tertiary storage is one way to make space reclaimable. Usable Flash Recovery Area includes free and reclaimable space.

Flash Recovery Area Location

Flash Recovery Area Size  MB

Flash Recovery Area Size must be set when the location is set.

Non-reclaimable Flash Recovery Area (MB) **164**

Reclaimable Flash Recovery Area (B) **0**

Free Flash Recovery Area (GB) **3.81**

☐ **Enable Flashback Database\***

Flashback database can be used for fast database point-in-time recovery, as it returns the database to a prior point-in-time without restoring files. Flashback is the preferred point-in-time recovery method in the recovery wizard when appropriate. The flash recovery area must be set to enable flashback database.

Flashback Retention Time  Hours

Current size of the flashback logs(GB) **n/a**

Lowest SCN in the flashback data **n/a**

Flashback Time **n/a**

**Flash Recovery Area Usage**

File Type	Size (GB)	Percentage (%)
Online Log	0.15	3.8%
Control File	0.01	0.2%
Archived Redo Log	0	0%
Backup Piece	0	0%
Image Copy	0	0%
Flashback Log	0	0%
Usable	3.81	96%

c) Ubah size untuk Fast Recovery Area menjadi 8 GB pilih 8 pada Flash Recovery Area Size kemudian pilih GB dari list.

**Flash Recovery**

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Current size of the flashback logs(GB) **n/a**

Lowest SCN in the flashback data **n/a**

Flashback Time **n/a**

**Flash Recovery Area Usage**

File Type	Size (GB)	Percentage (%)
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Image Copy	0	0%
Flashback Log	0	0%
Usable	3.81	96%

d) Klik Show SQL untuk melihat statment dan kemudian klik kembali

**Database Control**

Database Instance: [orcl.example.com](#) > [Recovery Settings](#) >

[Show SQL](#)

```
ALTER SYSTEM SET db_recovery_file_dest_size = 8589934592 SCOPE=BOTH
```

[Database](#) | [Setup](#) | [Preferences](#) | [Help](#) | [Logout](#)

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[About Oracle Enterprise Manager](#)

e) Klik Apply

Flashback Retention Time  Hours

Current size of the flashback logs(GB) **n/a**

Lowest SCN in the flashback data **n/a**

Flashback Time **n/a**

**Image Copy - 0GB (0%)**

**Flashback Log - 0GB (0%)**

**Usable - 3.81GB (96%)**

Initialization parameter changes to SPFILE only. If not checked, parameter changes will be made to both the SPFILE and the running instance.

[Go to this setting or parameter require a database restart.](#)

[Show SQL](#) [Revert](#) [Apply](#)

[Database](#) | [Setup](#) | [Preferences](#) | [Help](#) | [Logout](#)

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[About Oracle Enterprise Manager](#)

Database Instance: [orcl.example.com](#) > [Recovery Settings](#) > [Show SQL](#) [Revert](#) [Apply](#)

**Update Message**

The changes have been successfully applied.

**Recovery Settings**

[Show SQL](#) [Revert](#) [Apply](#)

**Instance Recovery**

The fast-start checkpointing feature is enabled by specifying a non-zero desired mean-time to recover (MTTR) value, which will be used to set the FAST\_START\_MTTR\_TARGET initialization parameter. This parameter controls the amount of time the database takes to perform crash recovery for a single instance. When fast-start checkpointing is enabled, Oracle automatically maintains the speed of checkpointing so that the requested MTTR is achieved. Setting the value to 0 will disable this functionality.

Current Estimated Mean Time To Recover (seconds) **25**

Desired Mean Time To Recover  Minutes

4) Lakukan pengecekan ada berapa banyak members yang dimiliki oleh redo log groups. Pastikan setidaknya terdapat 2 members pada redo log dalam group.

a) Klik server kemudian masuk pada Redo Log Groups dan catat berapa banyak members di kolom

## Database Instance: orcl.example.com

[Home](#)[Performance](#)[Availability](#)[Server](#)[Schema](#)[Data M](#)

### Storage

[Control Files](#)[Tablespaces](#)[Temporary Tablespace Groups](#)[Datafiles](#)[Rollback Segments](#)[Redo Log Groups](#)[Archive Logs](#)[Disk Groups](#)[Migrate to ASM](#)[Make Tablespace Locally Managed](#)

### Database Conf

[Memory Advisors](#)[Automatic Undo M](#)[Initialization Para](#)[View Database F](#)

terdapat 2 anggota disetiap kelompok

Database Instance: orcl.example.com > Redo Log Groups

Logged in As SYS

Object Type: Redo Log Group

Search

Enter an object name to filter the data that is displayed in your results set.

Object Name  Go

By default, the search returns all uppercase matches beginning with the string you entered. To run an exact or case-sensitive match, double quote the search string. You can use the wildcard symbol (%) in a double quoted string.

Selection Mode: Single Create

Select	Group #	Status	# of Members	Archived	Size (KB)	Sequence	First Change#
<input checked="" type="radio"/>	1	Inactive	2	No	51200	19	1351765
<input type="radio"/>	2	Current	2	No	51200	20	1355245
<input type="radio"/>	3	Inactive	2	No	51200	18	1319685

Database | Setup | Preferences | Help | Logout

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- b) Pilih salah satu Redo Log Groups dan Klik View untuk melihat dimana setiap anggota grup disimpan. Akan terlihat satu anggota di grup disk +DATA dan anggota kedua di grup disk +FRA.

Database Instance: orcl.example.com > Redo Log Groups > View Redo Log Group: 1

Logged in As SYS

Actions: Clear logfile Go Edit Return

Group # 1

File size 51200 KB

Status INACTIVE

Redo Log Members

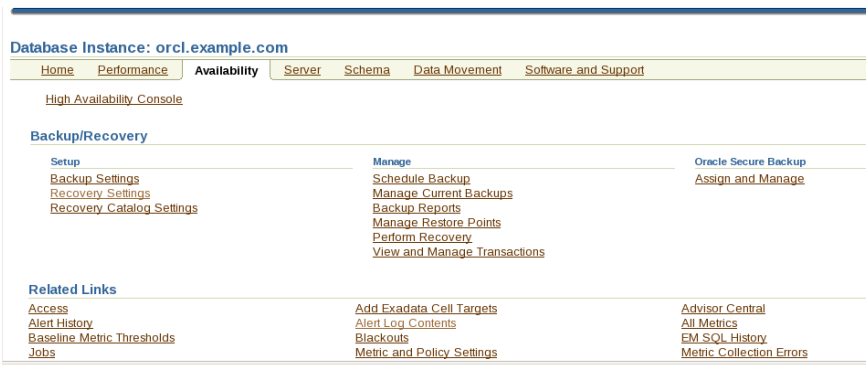
File Name	File Directory
group_1_261.1149177169	+DATA/orcl/online/
group_1_257.1149177173	+FRA/orcl/online/

Actions: Clear logfile Go Edit Return

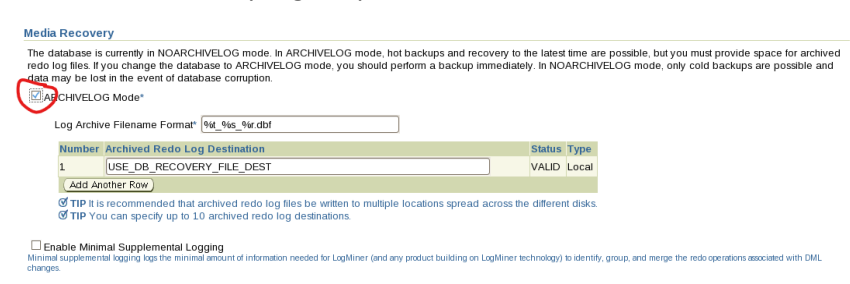
Database | Setup | Preferences | Help | Logout

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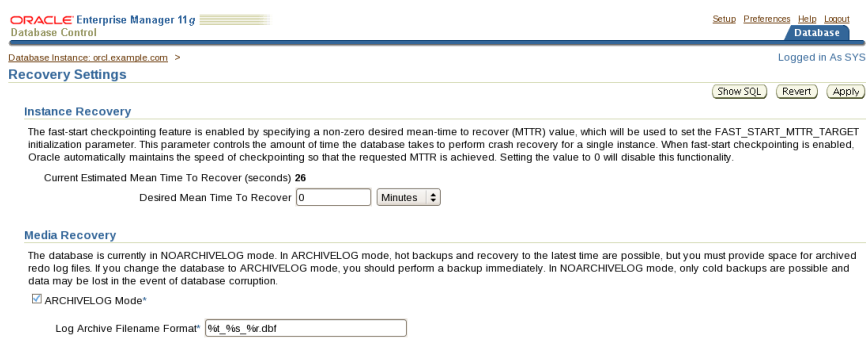
- 5) Setiap grup Archived kolom memiliki nilai NO. ini berarti database tidak menyimpan Salinan redo log yang akan digunakan untuk pemulihan dan jika terjadi kegagalan, maka akan kehilangan semua data sejak pencatatan terakhir.
- a) Pada Enterprise Manager, pilih Availability kemudian masuk pada Recovery Setting pada bagian Setup section.



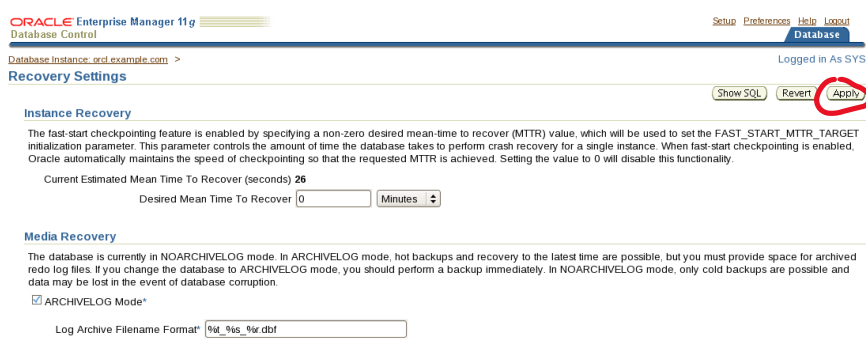
b) Pada Media Recovery region, pilih ARCHIVELOG Mode.



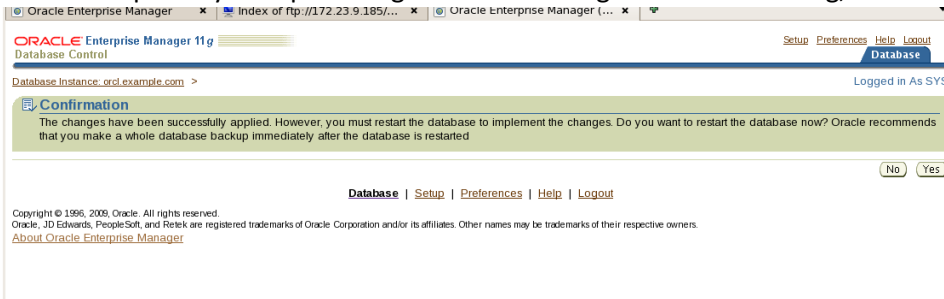
c) Perhatikan konfigurasi untuk tujuan log arsip yang menunjuk area fast recovery



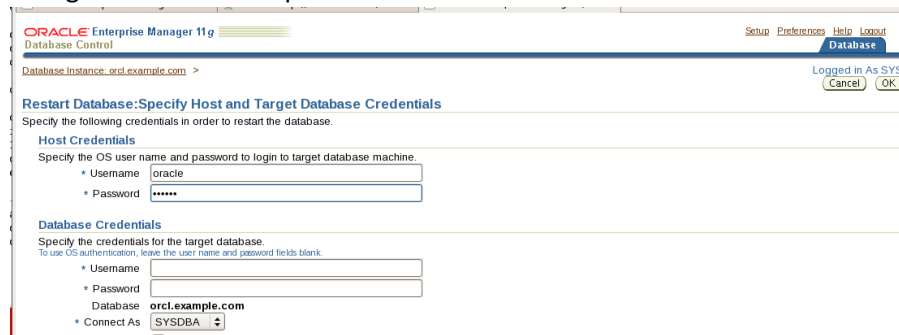
d) Kemudian klik Apply



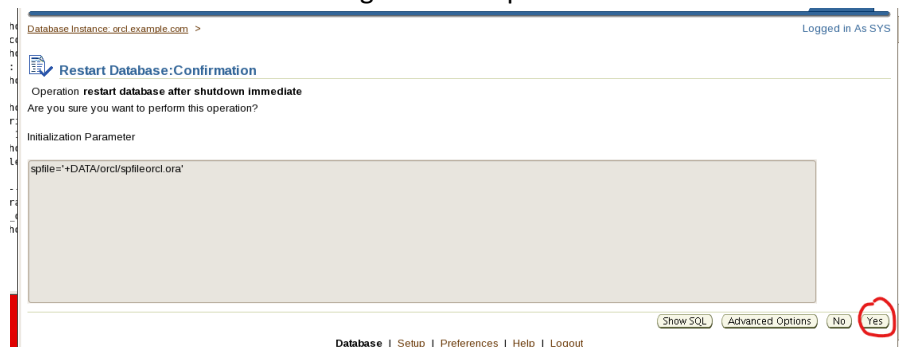
e) Ketika ada pertanyaan apakah ingin memulai ulang database sekarang, Klik Yes



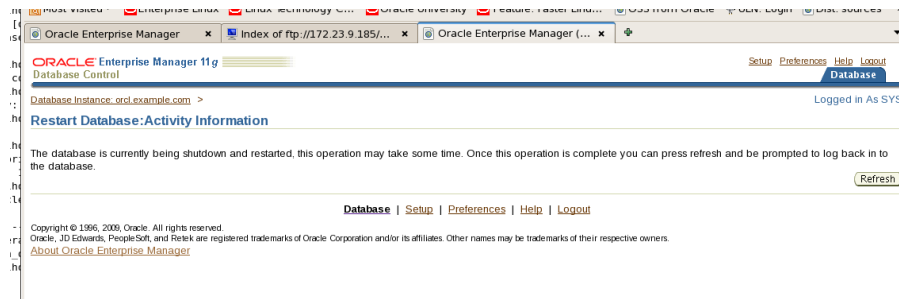
- f) Masukkan credential host untuk memulai ulang database dengan memasukkan oracle sebagai username dan password kemudian klik Ok.



- g) Kemudian klik Yes untuk mengkonfirmasi permintaan



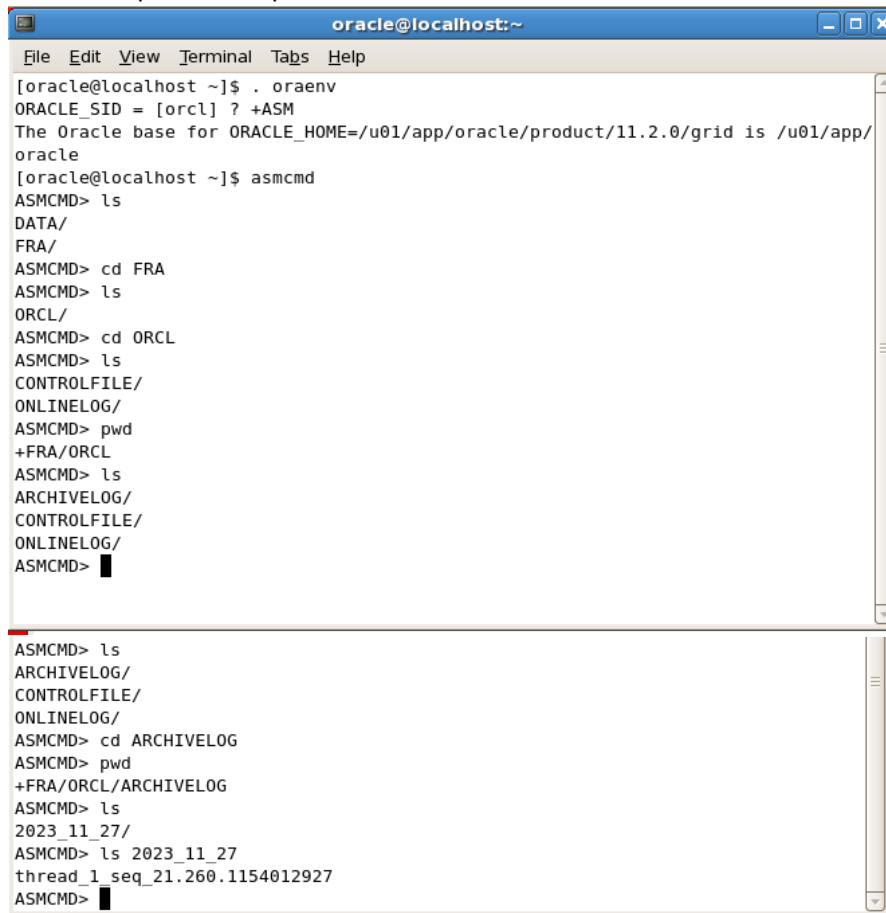
- h) Jika ada error selama aktivitas shutdown dan startup, Klik Ok untuk mengetahui kesalahan kemudian restart kembali.



- 6) Opsional, setelah database dimulai ulang, gunakan SQL\*Plus untuk memeriksa apakah database ada dalam ARCHIVELOG. Kemudian pada terminal masukkan SQL\*Plus sebagai SYSDBA dan jalankan perintah archive log list.

```
oracle@localhost:~  
File Edit View Terminal Tabs Help  
[oracle@localhost ~]$ . oraenv  
ORACLE_SID = [orcl] ?  
The Oracle base for ORACLE_HOME=/u01/app/oracle/product/11.2.0/dbhome_1 is /u01/app/oracle  
[oracle@localhost ~]$ sqlplus/ as sysdba  
bash: sqlplus/: No such file or directory  
[oracle@localhost ~]$ sqlplus / as sysdba  
  
SQL*Plus: Release 11.2.0.1.0 Production on Mon Nov 27 15:02:50 2023  
Copyright (c) 1982, 2009, Oracle. All rights reserved.  
  
Connected to:  
Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production  
With the Partitioning, Automatic Storage Management, OLAP, Data Mining  
and Real Application Testing options  
  
SQL> archive log list  
Database log mode                Archive Mode  
Automatic archival                Enabled  
Archive destination               USE_DB_RECOVERY_FILE_DEST  
Oldest online log sequence       19  
Next log sequence to archive     21  
Current log sequence             21  
SQL>
```

- 7) Opsional : Melakukan pengecekan apakah sudah ada archive log pada direktori FRA/ORCL  
a) Masukkan perintah seperti dibawah ini.

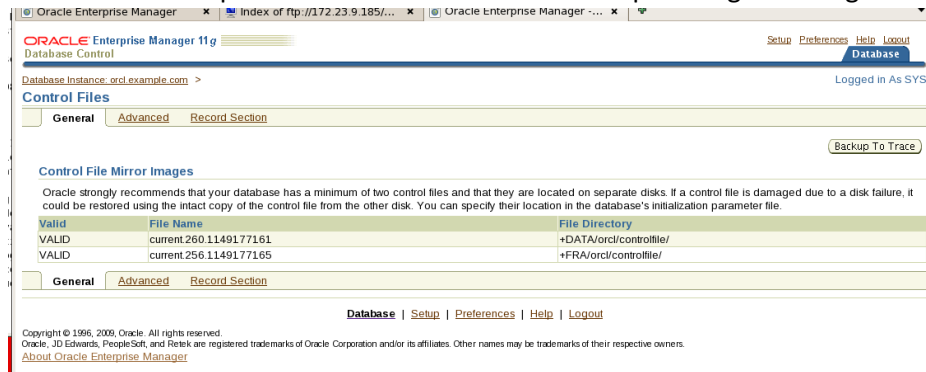


```
oracle@localhost:~  
File Edit View Terminal Tabs Help  
[oracle@localhost ~]$ . oraenv  
ORACLE_SID = [orcl] ? +ASM  
The Oracle base for ORACLE_HOME=/u01/app/oracle/product/11.2.0/grid is /u01/app/  
oracle  
[oracle@localhost ~]$ asmcmd  
ASMCMD> ls  
DATA/  
FRA/  
ASMCMD> cd FRA  
ASMCMD> ls  
ORCL/  
ASMCMD> cd ORCL  
ASMCMD> ls  
CONTROLFILE/  
ONLINELOG/  
ASMCMD> pwd  
+FRA/ORCL  
ASMCMD> ls  
ARCHIVELOG/  
CONTROLFILE/  
ONLINELOG/  
ASMCMD>   
  
ASMCMD> ls  
ARCHIVELOG/  
CONTROLFILE/  
ONLINELOG/  
ASMCMD> cd ARCHIVELOG  
ASMCMD> pwd  
+FRA/ORCL/ARCHIVELOG  
ASMCMD> ls  
2023_11_27/  
ASMCMD> ls 2023_11_27  
thread_1_seq_21.260.1154012927  
ASMCMD> 
```

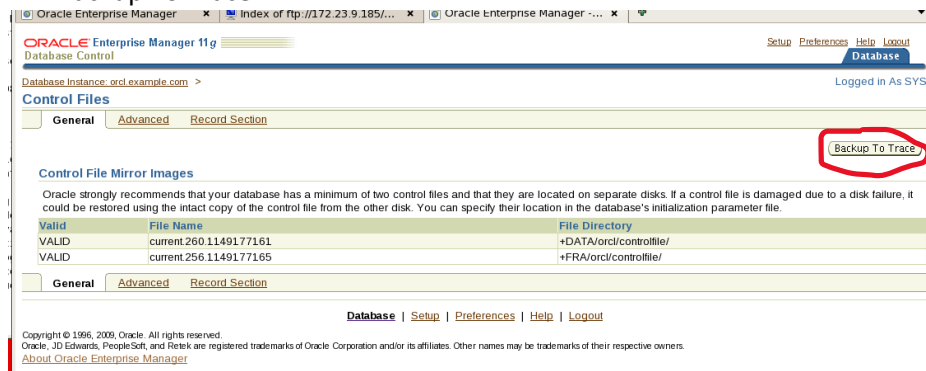
## Practice 14-1

### Performing Database Backups

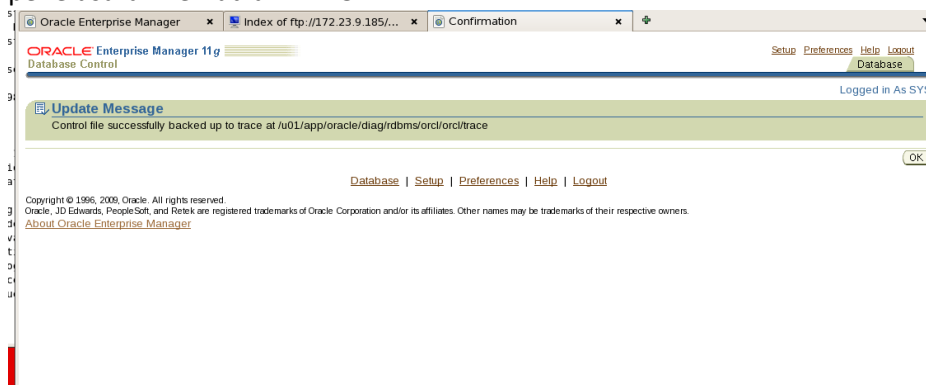
- 1) Melakukan pencadangan control files untuk melacak
  - a) Pada Enterprise Manager masuk sebagai SYS dengan peran SYSDBA untuk database oracle.
  - b) Kemudian masuk pada Server dan Pilih Control Files pada bagian storage.



- c) Klik Backup To Trace



- d) Selanjutnya akan muncul pesan telah sukses kemudian ada catatan lokasi direktori penelusuran kemudian Klik Ok.





- e) Kemudian buka terminal dan masuk oracle untuk dapat melihat pelacakan nama file sampai akhir pada alert log dengan mengikuti perintah dibawah ini :

```

oracle@localhost: /u01/app/oracle/diag/rdbms/orcl/orcl/trace
[oracle@localhost ~]$ cd /u01/app/oracle/diag/rdbms/orcl/orcl/trace
[oracle@localhost trace]$ pwd
/u01/app/oracle/diag/rdbms/orcl/orcl/trace
[oracle@localhost trace]$ tail alert_orcl.log
Current log# 1 seq# 22 mem# 1: +FRA/orcl/onlinelog/group_1.257.1149177173
Thread 1 advanced to log sequence 23 (LGWR switch)
Current log# 2 seq# 23 mem# 0: +DATA/orcl/onlinelog/group_2.262.1149177177
Current log# 2 seq# 23 mem# 1: +FRA/orcl/onlinelog/group_2.258.1149177181
Mon Nov 27 15:15:04 2023
Archived Log entry 2 added for thread 1 sequence 22 ID 0x63f508c5 dest 1:
Mon Nov 27 15:17:13 2023
ALTER DATABASE BACKUP CONTROLFILE TO TRACE
Backup controlfile written to trace file /u01/app/oracle/diag/rdbms/orcl/orcl/trace/orcl_ora_10639.trc
Completed: ALTER DATABASE BACKUP CONTROLFILE TO TRACE
[oracle@localhost trace]$

```

## Practice 15-1

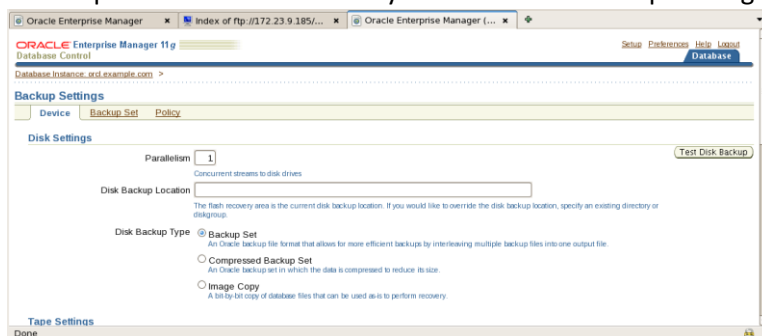
### Performing Database Backups

- f) Opsional: untuk melihat size dan penggunaan disetiap sesi yang berbeda dengan control file adalah dengan Klik Record Section pada tab

Control File Record Information			
Type	Record Size	Records Total	Records Used
CKPT PROGRESS	8180	11	0
DATABASE	316	1	1
DATAFILE	520	100	8
FILENAME	524	2298	15
LOG HISTORY	56	292	22
REDO LOG	72	16	3
REDO THREAD	256	8	1
TABSPACE	68	100	8

- 2) Apa tujuan dari setiap pecandangan disk?

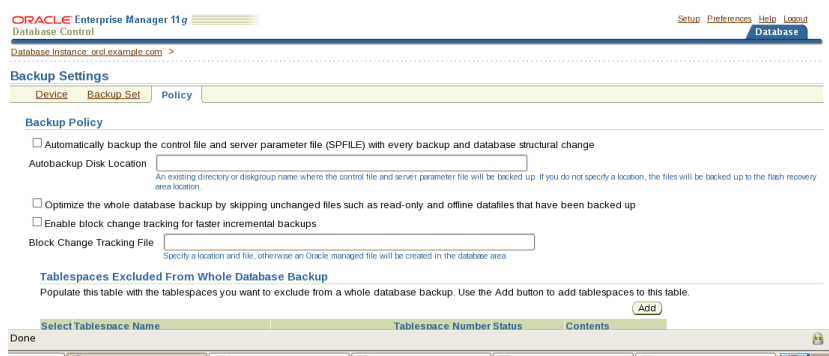
- a) Masuk pada halaman Availability kemudian klik Backup Settings



- b) Perhatikan pesan dibawah lokasi Cadangan Disk yaitu area fast recovery adalah lokasi candangan disk saat ini.

- 3) Menetapkan kebiasaan pencadangan untuk mencadangkan SPFILE dan Control Files secara otomatis

- a) Pada tab, klik policy kemudian dibawah Backup Settings.



ORACLE Enterprise Manager 11g Database Control Database Instance: orcl.example.com >

Backup Settings

Device Backup Set Policy

Backup Policy

☐ Automatically backup the control file and server parameter file (SPFILE) with every backup and database structural change

Autobackup Disk Location

☐ Optimize the whole database backup by skipping unchanged files such as read-only and offline datafiles that have been backed up

☐ Enable block change tracking for faster incremental backups

Block Change Tracking File

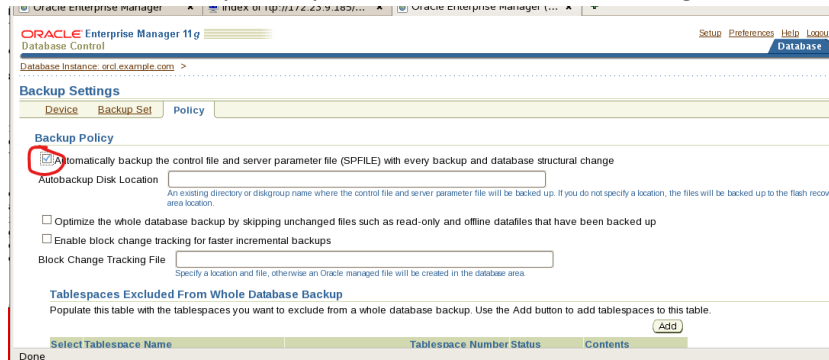
Tablespaces Excluded From Whole Database Backup

Populate this table with the tablespaces you want to exclude from a whole database backup. Use the Add button to add tablespaces to this table.

Add

Select Tablespace Name	Tablespace Number	Status	Contents
Done			

- b) Kemudian Pilih “Automatically backup the control file and server parameter file (SPFILE) with every backup and database structural change.”



ORACLE Enterprise Manager 11g Database Control Database Instance: orcl.example.com >

Backup Settings

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Backup Policy

☒ Automatically backup the control file and server parameter file (SPFILE) with every backup and database structural change

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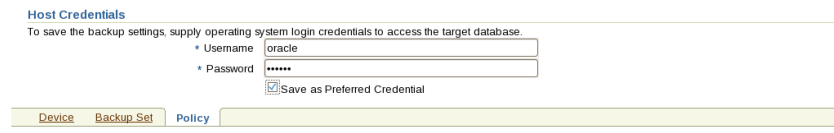
Tablespaces Excluded From Whole Database Backup

Populate this table with the tablespaces you want to exclude from a whole database backup. Use the Add button to add tablespaces to this table.

Add

Select Tablespace Name	Tablespace Number	Status	Contents
Done			

- c) Kemudian gulir kebawah dan masukkan oracle sebagai Host Credentials dan masukkan juga Oracle sebagai username dan password untuk server dan Klik “Save as Preferred Credential”



Host Credentials

To save the backup settings, supply operating system login credentials to access the target database.

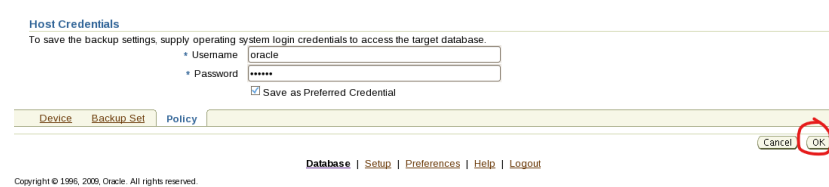
\* Username

\* Password

☒ Save as Preferred Credential

Device Backup Set Policy

- d) Kemudian Klik OK



Host Credentials

To save the backup settings, supply operating system login credentials to access the target database.

\* Username

\* Password

☒ Save as Preferred Credential

Device Backup Set Policy

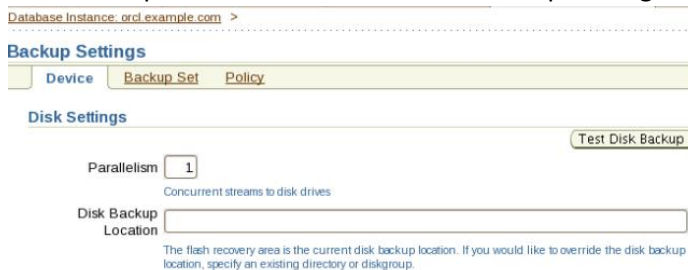
Cancel OK

Database | Setup | Preferences | Help | Logout

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- 4) Mencoba untuk membackup disk dengan Host Credential yaitu oracle.

- a) Klik Device pada tab dibawah Halaman Backup Settings



Database Instance: orcl.example.com >

Backup Settings

Device Backup Set Policy

Disk Settings

Test Disk Backup

Parallelism

Concurrent streams to disk drives

Disk Backup Location

The flash recovery area is the current disk backup location. If you would like to override the disk backup location, specify an existing directory or diskgroup.

- b) Kemudian pilih Backup Set sebagai tipe backup

**Disk Backup Type** ☒ **Backup Set**  
An Oracle backup file format that allows for more efficient backups by interleaving multiple backup files into one output file.

☐ **Compressed Backup Set**  
An Oracle backup set in which the data is compressed to reduce its size.

☐ **Image Copy**  
A bit-by-bit copy of database files that can be used as-is to perform recovery.

- c) Kemudian gulir kebawah dan pastikan Host Credentials diatur ke oracle
- d) Kemudian gulir keatas pada halaman kemudian Klik Test Disk Backup

ORACLE Enterprise Manager 11g  
Database Control  
Database Instance: orcl.example.com >

**Backup Settings**  
Device Backup Set Policy

**Disk Settings**

Parallelism   
Concurrent streams to disk drives

Disk Backup Location   
The flash recovery area is the current disk backup location. If you would like to override the disk backup location, specify an existing directory or diskgroup.

Disk Backup Type ☒ **Backup Set**  
An Oracle backup file format that allows for more efficient backups by interleaving multiple backup files into one output file.

☐ **Compressed Backup Set**  
An Oracle backup set in which the data is compressed to reduce its size.

☐ **Image Copy**  
A bit-by-bit copy of database files that can be used as-is to perform recovery.

[Tape Settings](#)

[Test Disk Backup](#)

- e) Kemudian akan ada pesan bahwa Disk Backup Test Successfull

ORACLE Enterprise Manager 11g  
Database Control  
Database Instance: orcl.example.com >

**Backup Settings**  
Device Backup Set Policy

**Disk Backup Test Successful**

**Disk Settings**

Parallelism   
Concurrent streams to disk drives

Disk Backup Location   
The flash recovery area is the current disk backup location. If you would like to override the disk backup location, specify an existing directory or diskgroup.

Disk Backup Type ☒ **Backup Set**  
An Oracle backup file format that allows for more efficient backups by interleaving multiple backup files into one output file.

☐ **Compressed Backup Set**  
An Oracle backup set in which the data is compressed to reduce its size.

☐ **Image Copy**  
A bit-by-bit copy of database files that can be used as-is to perform recovery.

[Test Disk Backup](#)

- 5) Mencadangkan seluruh basis data.

- a) Pilih Availability kemudian masuk pada Schedule Bacup uang berada pada bagian Manage Section

ORACLE Enterprise Manager 11g  
Database Control  
Database Instance: orcl.example.com  
Logged in As SYS

**Availability** Server Schema Data Movement Software and Support

[High Availability Console](#)

**Backup/Recovery**

**Setup**  
[Backup Settings](#)  
[Recovery Settings](#)  
[Recovery Catalog Settings](#)

**Manage**  
[Schedule Backup](#)  
[Manage Current Backups](#)  
[Backup Reports](#)  
[Manage Restore Points](#)  
[Perform Recovery](#)  
[View and Manage Transactions](#)

**Oracle Secure Backup**  
[Assign and Manage](#)

**Related Links**

[Access](#)  
[Alert History](#)  
[Baseline Metric Thresholds](#)  
[Jobs](#)

[Add Exadata Cell Targets](#)  
[Alert Log Contents](#)  
[Blackouts](#)  
[Metric and Policy Settings](#)

[Advisor Central](#)  
[All Metrics](#)  
[EM SQL History](#)  
[Metric Collection Errors](#)

Done

- b) Kemudian pilih Whole Database sebagai object yang akan dibackup

ORACLE Enterprise Manager 11g  
Database Control  
Database Instance: orcl.example.com >  
Schedule Backup  
Oracle provides an automated backup strategy based on your disk and/or tape configuration. Alternatively, you can implement your own customized backup strategy.  
Oracle-Suggested Backup  
Schedule a backup using Oracle's automated backup strategy. [Schedule Oracle-Suggested Backup](#)  
This option will back up the entire database. The database will be backed up on daily and weekly intervals.  
Customized Backup  
Select the object(s) you want to back up. [Schedule Customized Backup](#)  
☒ Whole Database  
☐ Tablespaces  
☐ Datafiles  
☐ Archived Logs  
☐ All Recovery Files on Disk  
Includes all archived logs and disk backups that are not already backed up to tape.  
Backup Strategies  
Oracle-suggested:  
• Provides an out-of-the-box backup strategy based on the backup destination  
• Sets up recovery window for backup management  
• Schedules recurring and immediate backups  
• Automates backup management  
Customized:  
• Specify the objects to be backed up  
• Choose disk or tape backup destination  
• Override the default backup settings  
• Schedule the backup  
https://localhost:localdomain:1158/em/console/database/rec/backup?event=start&target=orcl.example.com&type=oracle\_database#

- c) Kemudian konfirmasi oracle dan pastikan Host Credentials untuk username dan password adalah oracle.

- d) Kemudian Klik Schedule Customized Backup

ORACLE Enterprise Manager 11g  
Database Control  
Database Instance: orcl.example.com >  
Schedule Backup  
Oracle provides an automated backup strategy based on your disk and/or tape configuration. Alternatively, you can implement your own customized backup strategy.  
Oracle-Suggested Backup  
Schedule a backup using Oracle's automated backup strategy. [Schedule Oracle-Suggested Backup](#)  
This option will back up the entire database. The database will be backed up on daily and weekly intervals.  
Customized Backup  
Select the object(s) you want to back up. [Schedule Customized Backup](#)  
☒ Whole Database  
☐ Tablespaces  
☐ Datafiles  
☐ Archived Logs  
☐ All Recovery Files on Disk  
Includes all archived logs and disk backups that are not already backed up to tape.  
Backup Strategies  
Oracle-suggested:  
• Provides an out-of-the-box backup strategy based on the backup destination  
• Sets up recovery window for backup management  
• Schedules recurring and immediate backups  
• Automates backup management  
Customized:  
• Specify the objects to be backed up  
• Choose disk or tape backup destination  
• Override the default backup settings  
• Schedule the backup  
https://localhost:localdomain:1158/em/console/database/rec/backup?event=start&target=orcl.example.com&type=oracle\_database#

- e) Kemudian akan masuk pada halaman Schedule Customized Backup: Options pilih Full Backup untuk Backup Type.

ORACLE Enterprise Manager 11g  
Database Control  
Options Settings Schedule Review  
Schedule Customized Backup: Options  
Database: orcl.example.com  
Backup Strategy: Customized Backup  
Object Type: Whole Database  
Cancel Step 1 of 4 Next  
Backup Type  
☒ Full Backup  
☐ Use as the base of an incremental backup strategy  
☐ Incremental Backup  
A level 1 cumulative incremental backup includes all blocks changed since the most recent level 0 backup.  
☐ Refresh the latest datafile copy on disk to the current time using the incremental backup  
Backup Mode  
☒ Online Backup  
Can be performed when the database is open.  
☐ Offline Backup  
If the database is closed at the time of backup, it will be shut down and mounted before the backup, then is opened after it.  
Done

kemudian pilih "Use as the base of an incremental backup strategy"

ORACLE Enterprise Manager 11g  
Database Control  
Options Settings Schedule Review  
Schedule Customized Backup: Options  
Database: orcl.example.com  
Backup Strategy: Customized Backup  
Object Type: Whole Database  
Cancel Step 1 of 4 Next  
Backup Type  
☒ Full Backup  
☒ Use as the base of an incremental backup strategy  
☐ Incremental Backup  
A level 1 cumulative incremental backup includes all blocks changed since the most recent level 0 backup.  
☐ Refresh the latest datafile copy on disk to the current time using the incremental backup  
Backup Mode  
☒ Online Backup  
Can be performed when the database is open.  
☐ Offline Backup  
If the database is closed at the time of backup, it will be shut down and mounted before the backup, then is opened after it.  
Done

- f) Kemudian pada Backup Mode pilih Online Backup

ORACLE Enterprise Manager 11g  
Database Control  
Options Settings Schedule Review  
Schedule Customized Backup: Options  
Database: orcl.example.com  
Backup Strategy: Customized Backup  
Object Type: Whole Database  
Cancel Step 1 of 4 Next  
Backup Type  
☒ Full Backup  
☒ Use as the base of an incremental backup strategy  
☐ Incremental Backup  
A level 1 cumulative incremental backup includes all blocks changed since the most recent level 0 backup.  
☐ Refresh the latest datafile copy on disk to the current time using the incremental backup  
Backup Mode  
☒ Online Backup  
Can be performed when the database is open.  
☐ Offline Backup  
If the database is closed at the time of backup, it will be shut down and mounted before the backup, then is opened after it.  
Done

g) Kemudian pada Advanced Section pilih seperti dibawah ini:

Advanced

☒ Also back up all archived logs on disk

☒ Delete all archived logs from disk after they are successfully backed up

☐ Delete obsolete backups  
Delete backups that are no longer required to satisfy the retention policy.

☐ Use proxy copy supported by media management software to perform a backup  
If proxy copy of the selected files is not supported, a conventional backup will be performed.

Maximum Files per Backup Set

Section Size  KB

[Encryption](#)

[Return to Schedule Backup](#) [Cancel](#) [Step 1 of 4](#) [Next](#)

h) Pada halaman Schedule Customized Backup : Settings kemudian pilih Disk untuk backup location

ORACLE Enterprise Manager 11g Database Control

Setup Preferences Help Logout Database

Options Settings Schedule Review

Schedule Customized Backup: Settings

Database orcl.example.com

Backup Strategy Customized Backup

Object Type Whole Database

[Cancel](#) [Back](#) [Step 2 of 4](#) [Next](#)

Select the destination media for this backup. You can also override the default backup settings.

☒ Disk

Disk Backup Location +FRA

☐ Tape

Media Management Vendor (MMV) Library Parameters Not specified

[View Default Settings](#) [Override Default Settings](#)

Changed settings will only apply to the current backup.

[Return to Schedule Backup](#) [Cancel](#) [Back](#) [Step 2 of 4](#) [Next](#)

Database | Setup | Preferences | Help | Logout

Done

i) Kemudian klik next

j) Kemudian terima semua default pada halaman Schedule Customized Backup : Schedule dan kemudian klik Next

ORACLE Enterprise Manager 11g Database Control

Setup Preferences Help Logout Database

Options Settings Schedule Review

Schedule Customized Backup: Schedule

Database orcl.example.com

Backup Strategy Customized Backup

Object Type Whole Database

[Cancel](#) [Back](#) [Step 3 of 4](#) [Next](#)

Job

Job Name BACKUP\_ORCLEXAMPLE.COM\_000001

Job Description Whole Database Backup

Schedule

Type ☒ One Time (Immediately) ☐ One Time (Later) ☐ Repeating

[Return to Schedule Backup](#) [Cancel](#) [Back](#) [Step 3 of 4](#) [Next](#)

Database | Setup | Preferences | Help | Logout

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About Oracle Enterprise Manager

Done

k) Kemudian pada halaman Schedule Customized Backup : Review, review pada script RMAN dan kemudian klik Submit Job

ORACLE Enterprise Manager 11g Database Control

Setup Preferences Help Logout Database

Options Settings Schedule Review

Schedule Customized Backup: Review

Database orcl.example.com

Backup Strategy Customized Backup

Object Type Whole Database

[Cancel](#) [Edit RMAN Script](#) [Back](#) [Step 4 of 4](#) [Submit Job](#)

Settings

Destination Disk

Backup Type Use as the base of an incremental backup strategy

Backup Mode Online Backup

Flash Recovery Area +FRA

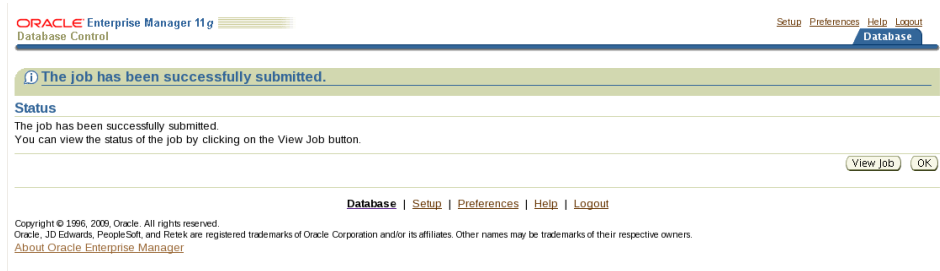
RMAN Script

The RMAN script below is generated based on previous input.

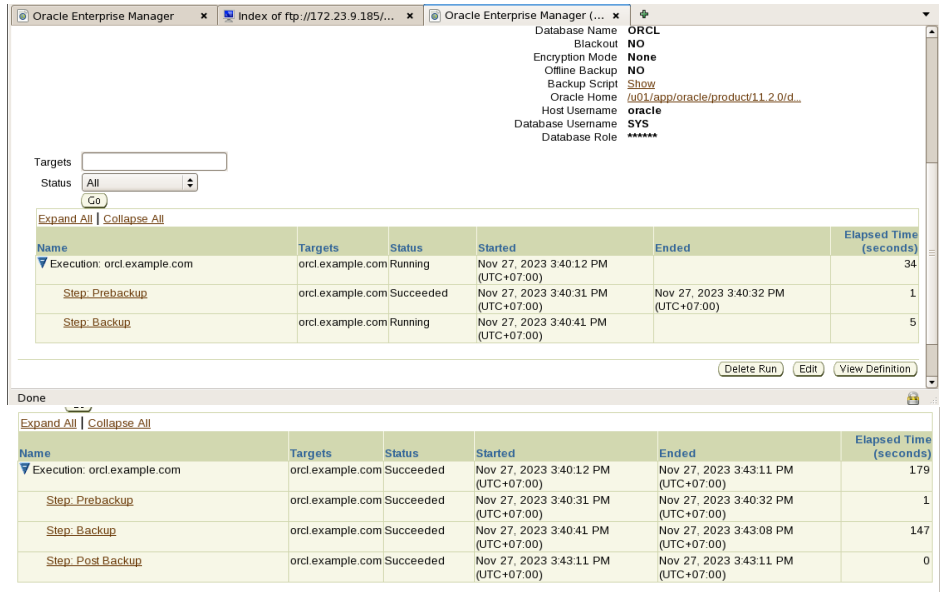
```
backup incremental level 0 cumulative device type disk tag '%TAG' database;  
backup device type disk tag '%TAG' archivelog all not backed up delete all input;
```

Done

- l) Kemudian Klik View Job pada monitor pada status untuk backup job. Ini waktunya tergantung pada perangkat keras dan sumber daya system.

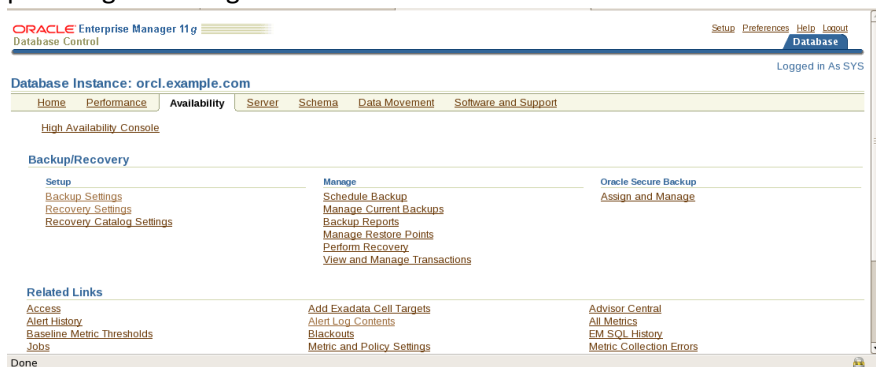


- m) Klik refresh pada browser untuk melihat job telah selesai

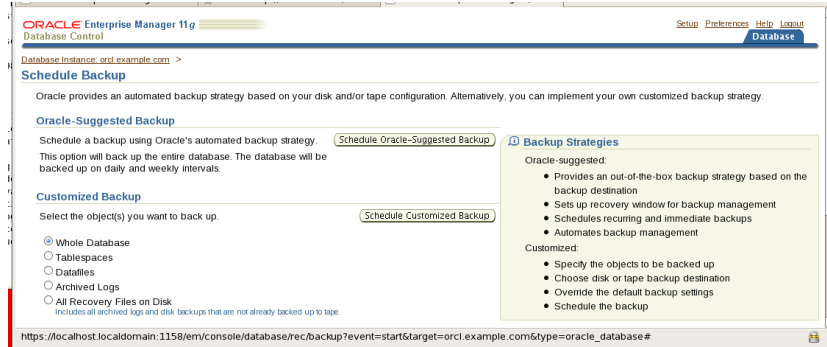


- 6) Membuat jadwal untuk pencadangan online

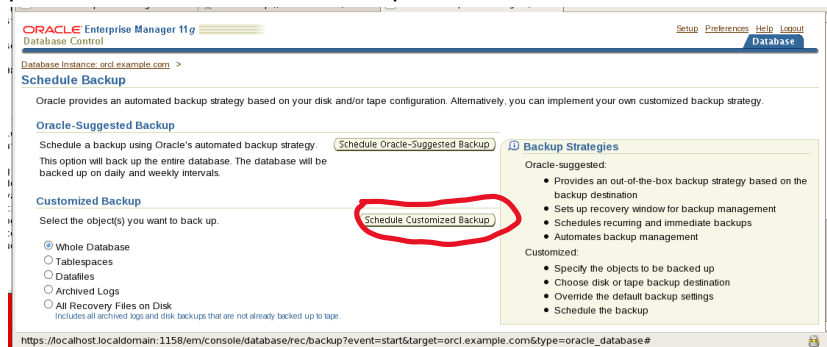
- a) Pada Enterprise Manager pilih Availability kemudian masuk pada Schedule Backup pada bagian manage



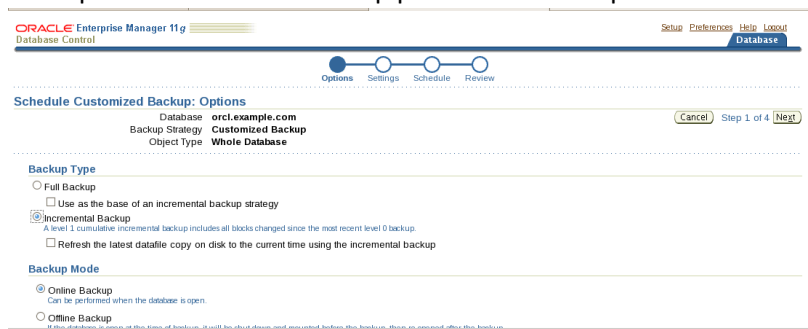
- b) Kemudian pilih Whole Database sebagai objek yang akan dibackup.



- c) Konfirmasi bahwa Host Credential username dan password adalah oracle kemudian pilih Schedule Customized Backup



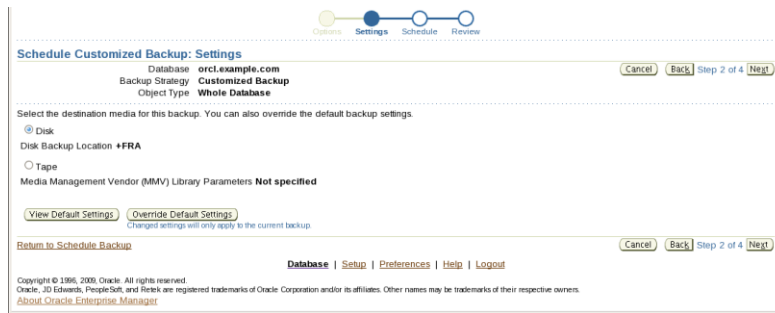
- d) Kemudian pada halaman Schedule Customized Backup: Options, pilih Incremental backup dan untuk mode backup pilih Online backup



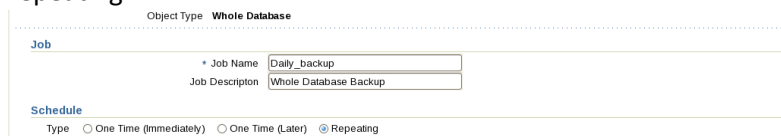
- e) Pada Advanced ikuti pada gambar dibawah ini



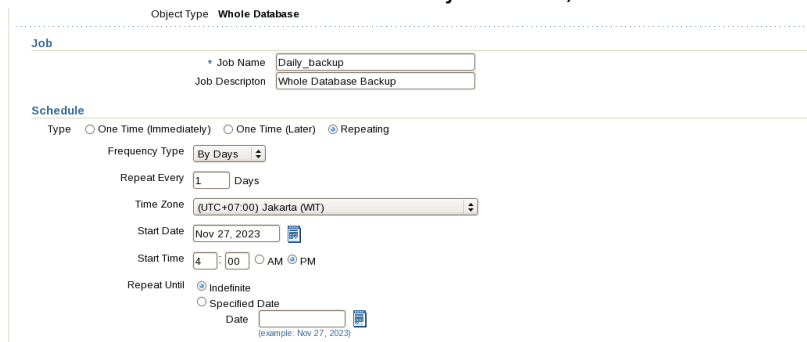
- f) Pada halaman Schedule Customized Backup: Setting, pilih Disk sebagai lokasi backup dan kemudian tekan next



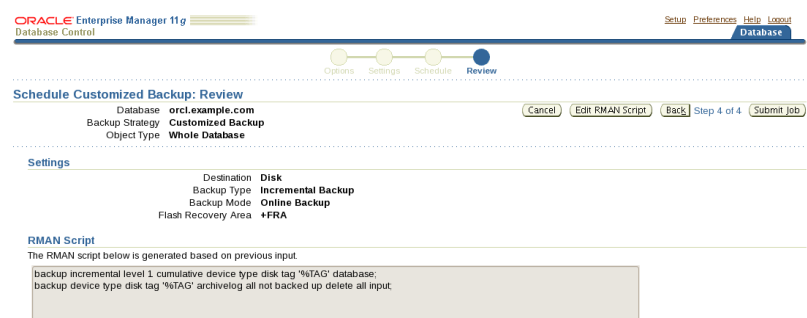
- g) Kemudian pada halaman Schedule Customized Backup: Schedule ubah nama job menjadi Nightly\_Backup dan terima default untuk deskripsi Job. Kemudian pilih repeating.



- h) Kemudian pilih By Days pada drop-down kemudian masukkan 1 pada field kemudian untuk start time masukkan 4.00 PM jika sudah, tekan next.



- i) Kemudian pada halaman Schedule Customized Backup : Review, review pada script RMAN dan kemudian klik Submit Job



- j) Kemudian akan ada pesan yang menunjukkan bahwa telah berhasil





k) Kemudian akan terlihat pada job activity list

Oracle Enterprise Manager 11g  
Database Control  
Job Activity  
Page Refreshed Nov 27, 2023 3:51:26 PM WIT

Advanced Search  
Name:   
Owner: All  
Status: All  
Scheduled Start: Last 7 days  
Job Type: All  
Target Type: Database Instance  
Target Name: orcl.example.com  
Show all jobs on the specified target regardless of my access to the jobs  
Show jobs scheduled to start during or after the selected period.  
Go Simple Search

View: Runs  
View Results Edit Create Like Copy To Library Suspend Resume Stop Delete Create Job OS Command Go

Select Name	Status (Executions)	Scheduled	Targets	Target Type	Owner	Job Type
<input checked="" type="radio"/> DAILY_BACKUP	1 Scheduled	Nov 27, 2023 4:00:00 PM WIT	orcl.example.com	Database Instance	SYS	Database Backup
<input type="radio"/> BACKUP_ORCL_EXAMPLE.COM_000001	1 Succeeded	Nov 27, 2023 3:40:12 PM (UTC+07:00)	orcl.example.com	Database Instance	SYS	Database Backup

Related Links

Saat sudah berada pada jam 4 :

Oracle Enterprise Manager 11g  
Database Control  
Job Activity  
Page Refreshed Nov 27, 2023 4:00:15 PM WIT

Advanced Search  
Name:   
Owner: All  
Status: All  
Scheduled Start: Last 7 days  
Job Type: All  
Target Type: Database Instance  
Target Name: orcl.example.com  
Show all jobs on the specified target regardless of my access to the jobs  
Show jobs scheduled to start during or after the selected period.  
Go Simple Search

View: Runs  
View Results Edit Create Like Copy To Library Suspend Resume Stop Delete Create Job OS Command Go

Select Name	Status (Executions)	Scheduled	Targets	Target Type	Owner	Job Type
<input checked="" type="radio"/> DAILY_BACKUP	1 Running	Nov 27, 2023 4:00:00 PM WIT	orcl.example.com	Database Instance	SYS	Database Backup
<input type="radio"/> BACKUP_ORCL_EXAMPLE.COM_000001	1 Succeeded	Nov 27, 2023 3:40:12 PM (UTC+07:00)	orcl.example.com	Database Instance	SYS	Database Backup

Related Links

jika ingin melihat proses running:

Oracle Enterprise Manager 11g  
Database Control  
Job Activity  
Page Refreshed Nov 27, 2023 4:00:15 PM WIT

Advanced Search  
Name:   
Owner: All  
Status: All  
Scheduled Start: Last 7 days  
Job Type: All  
Target Type: Database Instance  
Target Name: orcl.example.com  
Show all jobs on the specified target regardless of my access to the jobs  
Show jobs scheduled to start during or after the selected period.  
Go Simple Search

View: Runs  
View Results Edit Create Like Copy To Library Suspend Resume Stop Delete Create Job OS Command Go

Select Name	Status (Executions)	Scheduled	Targets	Target Type	Owner	Job Type
<input checked="" type="radio"/> DAILY_BACKUP	1 Running	Nov 27, 2023 4:00:00 PM WIT	orcl.example.com	Database Instance	SYS	Database Backup
<input type="radio"/> BACKUP_ORCL_EXAMPLE.COM_000001	1 Succeeded	Nov 27, 2023 3:40:12 PM (UTC+07:00)	orcl.example.com	Database Instance	SYS	Database Backup

Related Links

Oracle Enterprise Manager 11g  
Database Control  
Job Activity  
Page Refreshed Nov 27, 2023 4:00:15 PM WIT

Advanced Search  
Name:   
Owner: All  
Status: All  
Scheduled Start: Last 7 days  
Job Type: All  
Target Type: Database Instance  
Target Name: orcl.example.com  
Show all jobs on the specified target regardless of my access to the jobs  
Show jobs scheduled to start during or after the selected period.  
Go Simple Search

View: Runs  
View Results Edit Create Like Copy To Library Suspend Resume Stop Delete Create Job OS Command Go

Select Name	Status (Executions)	Scheduled	Targets	Target Type	Owner	Job Type
<input checked="" type="radio"/> DAILY_BACKUP	1 Running	Nov 27, 2023 4:00:00 PM WIT	orcl.example.com	Database Instance	SYS	Database Backup
<input type="radio"/> BACKUP_ORCL_EXAMPLE.COM_000001	1 Succeeded	Nov 27, 2023 3:40:12 PM (UTC+07:00)	orcl.example.com	Database Instance	SYS	Database Backup

Related Links

Tampilan job activity akan berubah seperti dibawah ini :

Oracle Enterprise Manager 11g  
Database Control  
Job Activity  
Page Refreshed Nov 27, 2023 4:04:47 PM WIT

Advanced Search  
Name:   
Owner: All  
Status: All  
Scheduled Start: Last 7 days  
Job Type: All  
Target Type: Database Instance  
Target Name: orcl.example.com  
Show all jobs on the specified target regardless of my access to the jobs  
Show jobs scheduled to start during or after the selected period.  
Go Simple Search

View: Runs  
View Results Edit Create Like Copy To Library Suspend Resume Stop Delete Create Job OS Command Go

Select Name	Status (Executions)	Scheduled	Targets	Target Type	Owner	Job Type
<input checked="" type="radio"/> DAILY_BACKUP	1 Scheduled	Nov 28, 2023 4:00:00 PM WIT	orcl.example.com	Database Instance	SYS	Database Backup
<input type="radio"/> DAILY_BACKUP	1 Succeeded	Nov 27, 2023 4:00:00 PM WIT	orcl.example.com	Database Instance	SYS	Database Backup
<input type="radio"/> BACKUP_ORCL_EXAMPLE.COM_000001	1 Succeeded	Nov 27, 2023 3:40:12 PM (UTC+07:00)	orcl.example.com	Database Instance	SYS	Database Backup

Related Links