

6 Struktur Penyimpanan

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ORACLE®

Tujuan

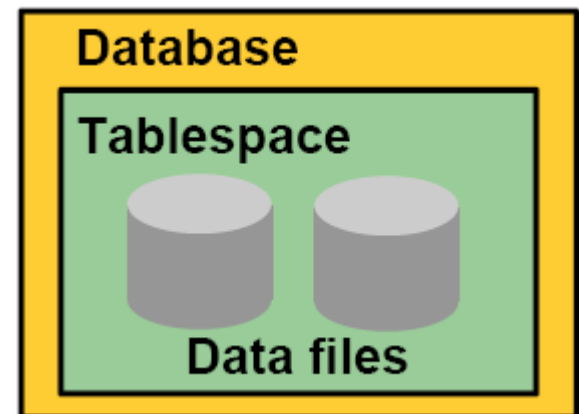
Setelah menyelesaikan bab ini, anda seharusnya dapat melakukan hal-hal berikut:

- Mendefinisikan tujuan/kegunaan dari pembuatan tablespaces dan data files
- Membuat tablespaces
- Memanage/mengelola tablespaces
- Memperoleh informasi mengenai tablespaces

Tablespaces dan Data Files

Penyimpanan data di Oracle secara Logik terdapat pada tablespaces dan secara fisik terdapat pada data files.

- Tablespaces:
 - Hanya dapat dimiliki oleh satu database pada satu waktu
 - Bisa terdiri dari satu / lebih data files
 - Tablespace dibagi menjadi beberapa unit penyimpanan logik
- Data files:
 - Hanya dapat dimiliki oleh satu tablespace dan satu database
 - Adalah repository untuk data dari objek schema



Space Management pada Tablespaces

- **Locally managed tablespace:**
 - Free extents untuk manage di dalam tablespace.
 - Bitmap digunakan untuk merecord free extents tersebut.
 - Block atau group block terdiri dari beberapa bit yang saling berkorespondensi.
 - Bit value mengindikasikan tablespaces tersebut kosong atau sedang digunakan.
- **Dictionary-managed tablespace:**
 - Free extents dimanage oleh data dictionary.
 - Table yang sesuai akan diupdate setiap kali extent digunakan.

Extent Management

- ☒ Locally Managed
- ☐ Dictionary Managed

Membuat Tablespace Baru

Database: orcl.oracle.com > Tablespaces > Create Tablespace Logged in As SYS

Create Tablespace

[Show SQL](#) [Cancel](#) [OK](#)

General [Storage](#) [Thresholds](#)

* Name

Extent Management

- ☒ Locally Managed
- ☐ Dictionary Managed

Type

- ☒ Permanent
 - ☐ Set as default permanent tablespace
- ☐ Temporary
 - ☐ Set as default temporary tablespace
- ☐ Undo

Status

- ☒ Read Write
- ☐ Read Only
- ☐ Offline

Datafiles

☐ Use bigfile tablespace
Tablespace can have only one datafile with no practical size limit.

[Add](#)

Select	Name	Directory	Size (MB)
<input checked="" type="radio"/>	inventory01.dbf	/u01/app/oracle/oradata/orcl/	50.00

[Edit](#) [Remove](#)

Storage untuk Locally Managed Tablespace

Database: [orcl.us.oracle.com](#) > [Tablespaces](#) > Create Tablespace [Logged in As SYS](#)

Create Tablespace

[Show SQL](#) [Cancel](#) [OK](#)

[General](#) **Storage** [Thresholds](#)

Extent Allocation

☒ Automatic

☐ Uniform

Size

Segment Space Management

☒ Automatic

Objects in the tablespace automatically manage their free space. It offers high performance for free space management.

☐ Manual

Objects in the tablespace will manage their free space using free lists. It is provided for backward compatibility.

Tablespace2 didalam Preconfigured Database

- **SYSTEM**
- **SYSAUX**
- **TEMP**
- **UNDOTBS1**
- **USERS**
- **EXAMPLE**

									Create
									Edit View Delete Actions Add Datafile Go
Select	Name ▲	Type	Extent Management	Segment Management	Status	Size (MB)	Used (MB)	Used (%)	
<input checked="" type="radio"/>	EXAMPLE	PERMANENT	LOCAL	AUTO	ONLINE	150.000	66.875	<div><div></div></div>	44.58
<input type="radio"/>	SYSAUX	PERMANENT	LOCAL	AUTO	ONLINE	230.000	222.688	<div><div></div></div>	96.82
<input type="radio"/>	SYSTEM	PERMANENT	LOCAL	MANUAL	ONLINE	440.000	434.375	<div><div></div></div>	98.72
<input type="radio"/>	TEMP	TEMPORARY	LOCAL	MANUAL	ONLINE	26.000	25.000	<div><div></div></div>	96.15
<input type="radio"/>	UNDOTBS1	UNDO	LOCAL	MANUAL	ONLINE	25.000	11.750	<div><div></div></div>	47.00
<input type="radio"/>	USERS	PERMANENT	LOCAL	AUTO	ONLINE	5.000	2.750	<div><div></div></div>	55.00

Mengubah (Alter) Tablespace

Edit Tablespace: EXAMPLE

Show SQLRevertApply

GeneralStorageThresholds

NameEXAMPLE

Bigfile tablespaceNo

Extent Management

☒ Locally Managed

☒ Dictionary Managed

Type

☒ Permanent

☐ Set as default permanent tablespace

☒ Temporary

☐ Set as default temporary tablespace

☒ Undo

Status

☒ Read Write

☐ Read Only

☐ Offline

Offline ModeNormal

Normal

Normal

Temporary

Immediate

For Recover

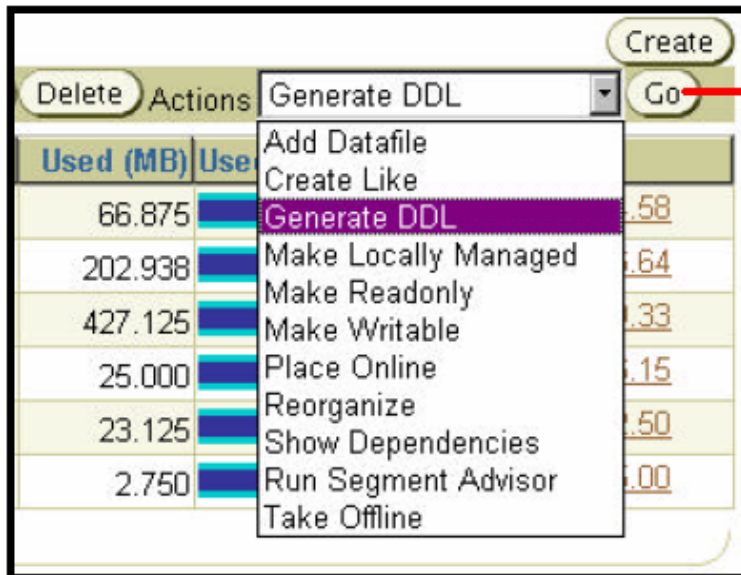
Datafiles

Add

EditRemove

Select	Name	Directory	Size (MB)	Used (MB)
<input checked="" type="radio"/>	example01.dbf	/u01/app/oracle/product/10.1.0/oradata/orcl/	150.00	66.88

Tindakan2 pada Tablespaces



Edit Tablespace: EXAMPLE

Logged in As SYS

DDL


Return

```
CREATE SMALLFILE TABLESPACE "EXAMPLE" DATAFILE
'/u01/app/oracle/oradata/orcl/example01.dbf' SIZE 150M
REUSE AUTOEXTEND ON NEXT 640K MAXSIZE 32767M NOLOGGING
EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO
BEGIN DBMS_SERVER_ALERT.SET_THRESHOLD
(9000,NULL,NULL,NULL,1,1,NULL,5,'EXAMPLE'); END;
```

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Menghapus (Drop) Tablespaces

Database: [orcl.us.oracle.com](#) > [Tablespaces](#) > Delete Tablespace: EXAMPLE Logged in As SYS

 **Warning**

Once a tablespace has been dropped, the objects and data in it will no longer be available. To recover them can be a time consuming process. Oracle recommends a backup before and after dropping a tablespace.

Are you sure you want to delete Tablespace EXAMPLE?

☒ Delete associated datafiles from the OS

No Yes

No Yes

↑

Edit View Delete Actions Run Segment Advisor Go									
Select	Name ▲	Type	Extent Management	Segment Management	Status	Size (MB)	Used (MB)	Used (%)	
<input checked="" type="radio"/>	EXAMPLE	PERMANENT	LOCAL	AUTO	ONLINE	150.000	66.875	<div></div>	44.58
<input type="radio"/>	SYSAUX	PERMANENT	LOCAL	AUTO	ONLINE	220.000	211.313	<div></div>	96.05
<input type="radio"/>	SYSTEM	PERMANENT	LOCAL	MANUAL	ONLINE	430.000	427.313	<div></div>	99.38
<input type="radio"/>	TEMP	TEMPORARY	LOCAL	MANUAL	ONLINE	26.000	25.000	<div></div>	96.15
<input type="radio"/>	UNDOTBS1	UNDO	LOCAL	MANUAL	ONLINE	25.000	11.938	<div></div>	47.75
<input type="radio"/>	USERS	PERMANENT	LOCAL	AUTO	ONLINE	5.000	2.750	<div></div>	55.00

Menampilkan Informasi Tablespaces

Database: [orcl.oracle.com](#) > [Tablespaces](#) >
View Tablespace: EXAMPLE Logged in As SYS

View Tablespace: EXAMPLE

[Edit](#) [Return](#)

Name **EXAMPLE**
Bigfile tablespace **No**
Status **ReadWrite**
Type **Permanent**
Extent Management **local**

Storage

Allocation Type **Automatic**
Segment Space Management **Automatic**
Enable logging **No**
Block Size (B) **8192**

Datafiles

Name	Directory	Size (MB)	Used (MB)
example01.dbf	/u01/app/oracle/oradata/orcl/	150.00	<div><div></div></div> 80.25

Thresholds

Use Default Thresholds
Warning (% used) **85**
Critical (% used)

[Edit](#) [View](#) [Delete](#) Actions [Go](#)

Select	Name ▲	Type	Extent Management	Segment Management	Status	Size (MB)	Used (MB)	Use
<input checked="" type="radio"/>	EXAMPLE	PERMANENT	LOCAL	AUTO	ONLINE	150.000	80.250	<div><div></div></div>

Ringkasan

Pada bab ini, anda seharusnya telah mempelajari bagaimana cara untuk:

- Menggunakan tablespaces untuk memisahkan data
- Membuat bermacam-macam tipe dari tablespaces
- Memanage tablespaces
- Memperoleh informasi mengenai tablespaces