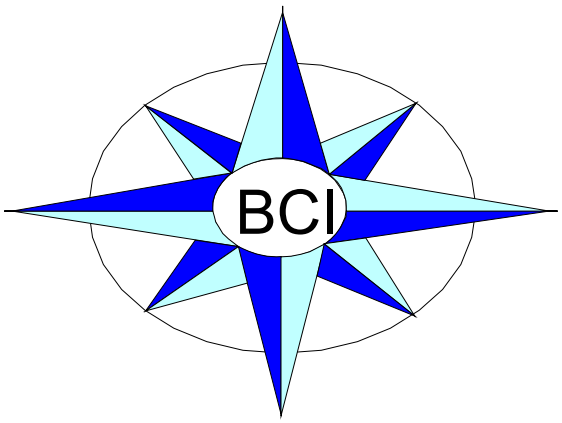
Practical Exercise 2
(Manage Database Storage Structures)



ORACLE DBA I

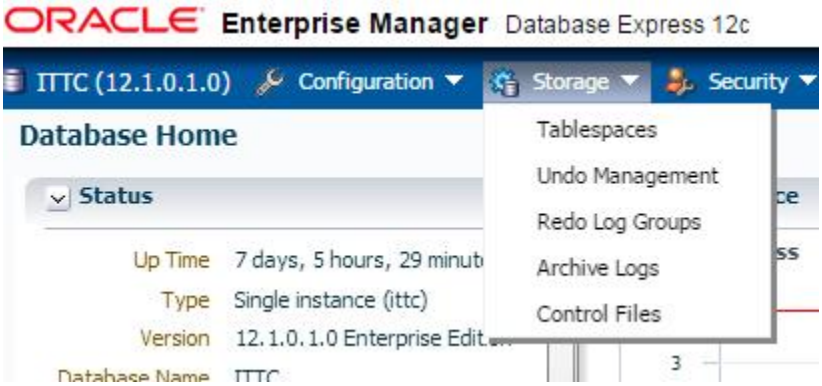
Practical Exercise 2
Manage Database Storage Structures

DIRECTIONS: This is a hands-on performance exercise. Follow the directions provided. You will have 50 minutes to complete this exercise. DO YOUR OWN WORK!

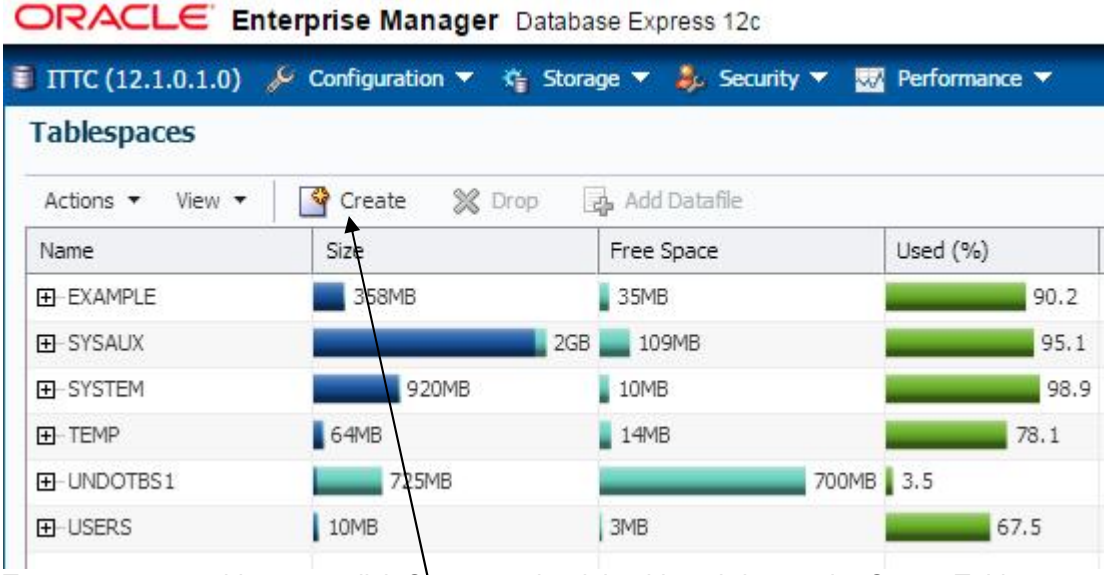
Perform the following steps:

1. Start a web browser and connect to the Enterprise Manager Database Express URL on your Oracle database server. https://<your computer name>:5500/em -- where xx is your pc number. This is the orcl2 database GUI interface.

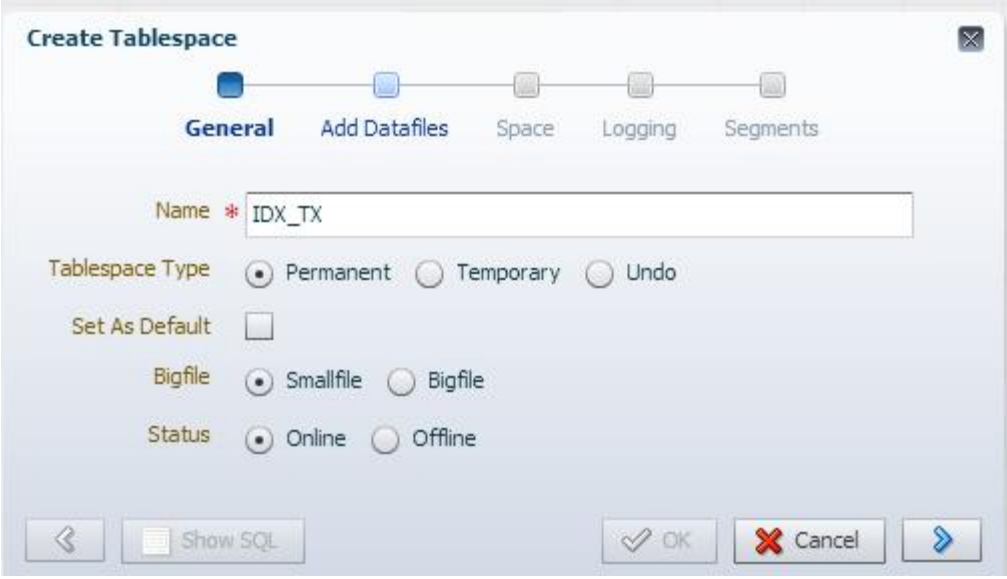
2. Log in to your database as the user SYSTEM with the password of password.
3. On the Enterprise Manager Express main page, click the Storage hyperlink to display the Tablespace page.



4. Click the Tablespaces hyperlink under Storage to display the current tablespaces in the database and their space utilization.

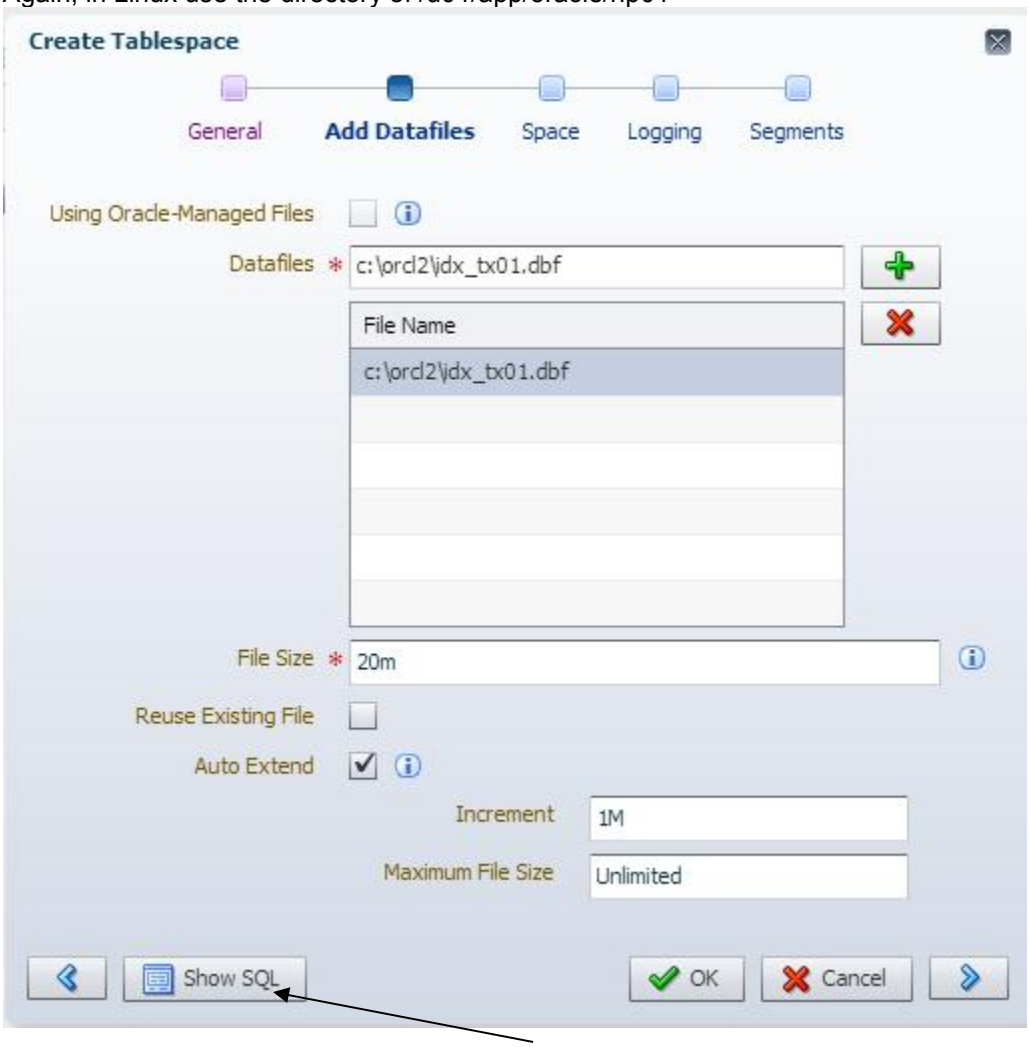


5. To create a new tablespace, click Create on the right side to bring up the Create Tablespace screen.
6. In the name box, enter idx_tx. Leave your tablespace at the default values of Locally Managed, Permanent, and Read Write.

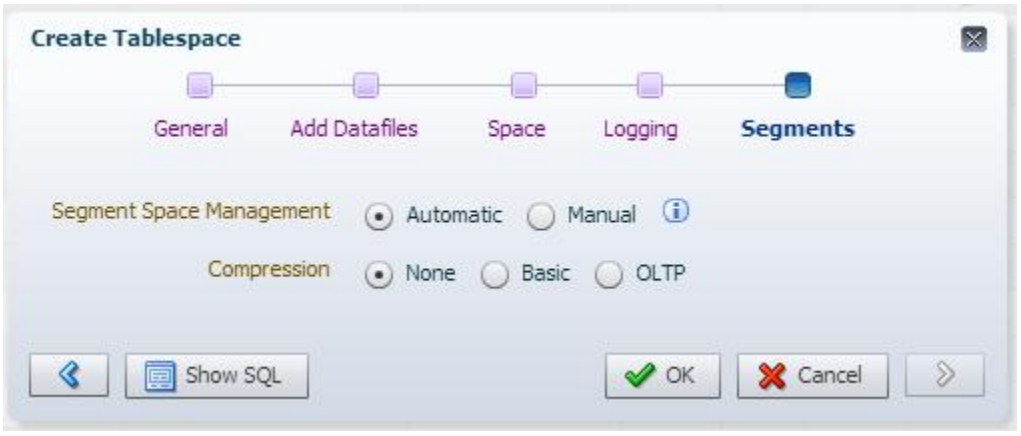


7. Under the Datafiles heading, leave the Use Bigfile Tablespace option unchecked (smallfile is the default)and click > option to bring up datafile naming screen..
8. On the Add Datafile page, enter the name of idx_tx01.dbf as the name of the datafile for the tablespace and ensure its location is a subdirectory of c:\hp01 in windows or in linux it will be The /u01/app/oracle/hp01 directory. You will need to create the orcl2 directory.
   Specify a file size of 20M and specify autogrowth in increments of 1M. Click the + symbol to move the directory and file_name to the Filename area as shown below. Click the > to continue

Again, in Linux use the directory of /u01/app/oracle/hp01



9. On the Create Tablespace page, click Show SQL to display the SQL commands that will be sent to the database to create the tablespace. Click Return when done reviewing the code.
10. Click the > box to continue. Leave extent allocation as automatic, Segment Space Management as automatic, and Enable logging as Yes. Click on the > box to continue.
11. To create the tablespace, click on the OK button.



After the tablespace is created, click on the + symbol on any database you wish to review after the tablespace has been created, you will be returned to the Tablespaces page of Enterprise Manager.

After the tablespace has been created, you will need to return to the Tablespaces page of Enterprise Manager. Now, create another tablespace with the following information:

Tablespace Name: Data
Values: Locally Managed, Permanent, and Read Write
Datafiles: Leave Bigfile Tablespace box unchecked.
Add Datafile c:\oracle2\oradata\data01.dbf or linux /u01/app/oracle2 -- make this dir.
$ Mkdir oracle2
Size: 100M, autogrow in increments of 50M, maximum of 500M
Storage: Extent Allocation – Automatic; Segment Space Management – Automatic; Enable Logging – Yes
No changes to Thresholds

Now, let's alter one of the previously created tablespaces. To do this, perform the following steps.

1. Go to Enterprise Manager Express
2. Click the Tablespaces hyperlink under Storage.
3. Select the DATA tablespace and then click Actions. Note that the majority of options are grayed out except for the selections to make this the default tablespace for the database, and various status options.
4. Select Set Status and display the four available modes. View the options.
5. If you want to add a datafile to the tablespace, you click Add Datafiles. Click Show SQL to display the SQL code required to make your changes. Click Return when finished.
6. Select the tablespace called DATA and then click DROP to display the Delete Tablespace warning. Read the warning and note that a backup should always be performed before deleting a tablespace in case you want to get the data back.
7. Ensure that the Delete Associated Datafiles from the OS check box is checked and then click Yes to delete the tablespace.
8. Notice that the tablespace is no longer listed on the Tablespaces page.

Perform the following:

From sql*plus or SQL DEVELOPER, logging in as system/password, display the information from the data dictionary by issuing a query for dba_data_files as shown below.

```
SELECT file_name, tablespace_name, bytes,
autoextensible, increment_by
FROM DBA_DATA_FILES;
```

Query the dynamic performance view V$DATAFILE to verify the result.

```
select name, bytes, create_bytes FROM v$datafile;
```

Move the tables Pers_person_tbl and pers_svcmbr_tbl owned by sidpers from the system tablespace to the IDX_TX tablespace or the users tablespace (your choice). Move the PERSON_IDX1 index from the system tablespace to the users tablespace.

```
SQL> alter table pers_person_tbl
      Move tablespace idx_tx
SQL> alter table pers_svcmbr_tbl
     Move tablespace idx_tx;
SQL> alter index PERSON_IDX1
     Rebuild tablespace users;
```

1. Check to see if the tables went into the new tablespace.

Did the tables go into the new Tablespace? Why or why not?