Stanford
nâng tầm tri thức

# 8

# Controlling the Database

Oracle for Base

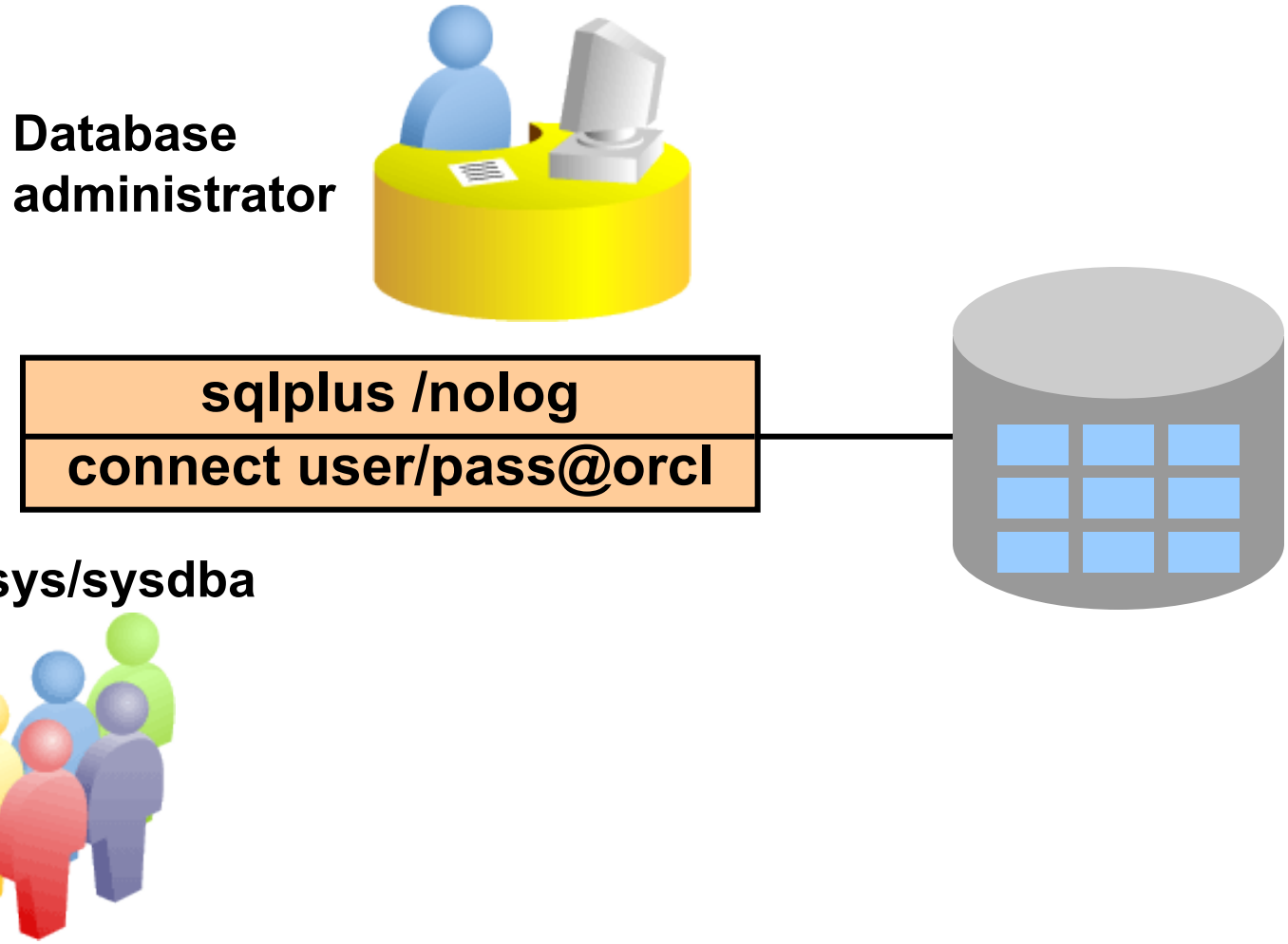
ORACLE

# Objectives

After completing this lesson, you should be able to do the following:

- iSQL*Plus
- Accessing Database Control
- Start and stop the Oracle Listener
- Start up and shut downOracle Database

# iSQL*Plus



# Accessing Database Control

- Login to the database using a username that is authorized to access Database Control.
- This initially will be SYS, SYSMAN or SYSTEM.
- Use the password you specified for the account during the database installation.

# SYSOPER and SYSDBA

- **SYSOPER**: Is a special database administration role that permits adatabase administrator to perform STARTUP, SHUTDOWN, ALTER DATABASE OPEN/MOUNT, ALTER DATABASE BACKUP, ARCHIVE LOG, and RECOVER, and includes RESTRICTED SESSION privileges.
- When you connect as SYSOPER,  you are in the public schema.

# SYSOPER and SYSDBA

- **SYSDBA:** Is a special database administration role that contains every system privilege with ADMIN OPTION and SYSOPER system privileges. SYSDBA also permits CREATE DATABASE actions and in complete recovery.
- When you connect with SYSDBA privileges,  you are in the schema owned by SYS.

# Changing the Listener Status

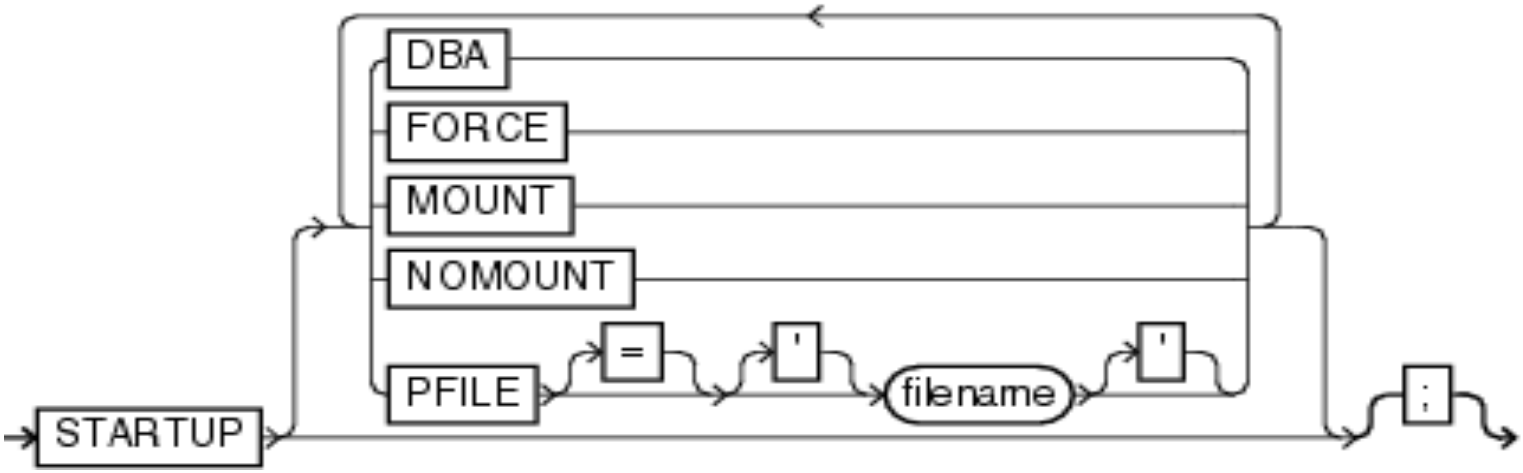
A listener that allows connections to the database. The command line method for starting, stopping, and seeing the status of the listener is:

```
lsnrctl START[listener_name]
lsnrctl STOP [listener_name]
lsnrctl STATUS[listener_name]
```

Where **listener_name** is the name of the listener defined in the **listener.ora** file.
It is not necessary to identify the listener if you are using the default listener, named **LISTENER**.

# Startup and Shutdown

- When starting the database, you select the state in which it starts. The following scenarios describe different stages of starting up an instance.

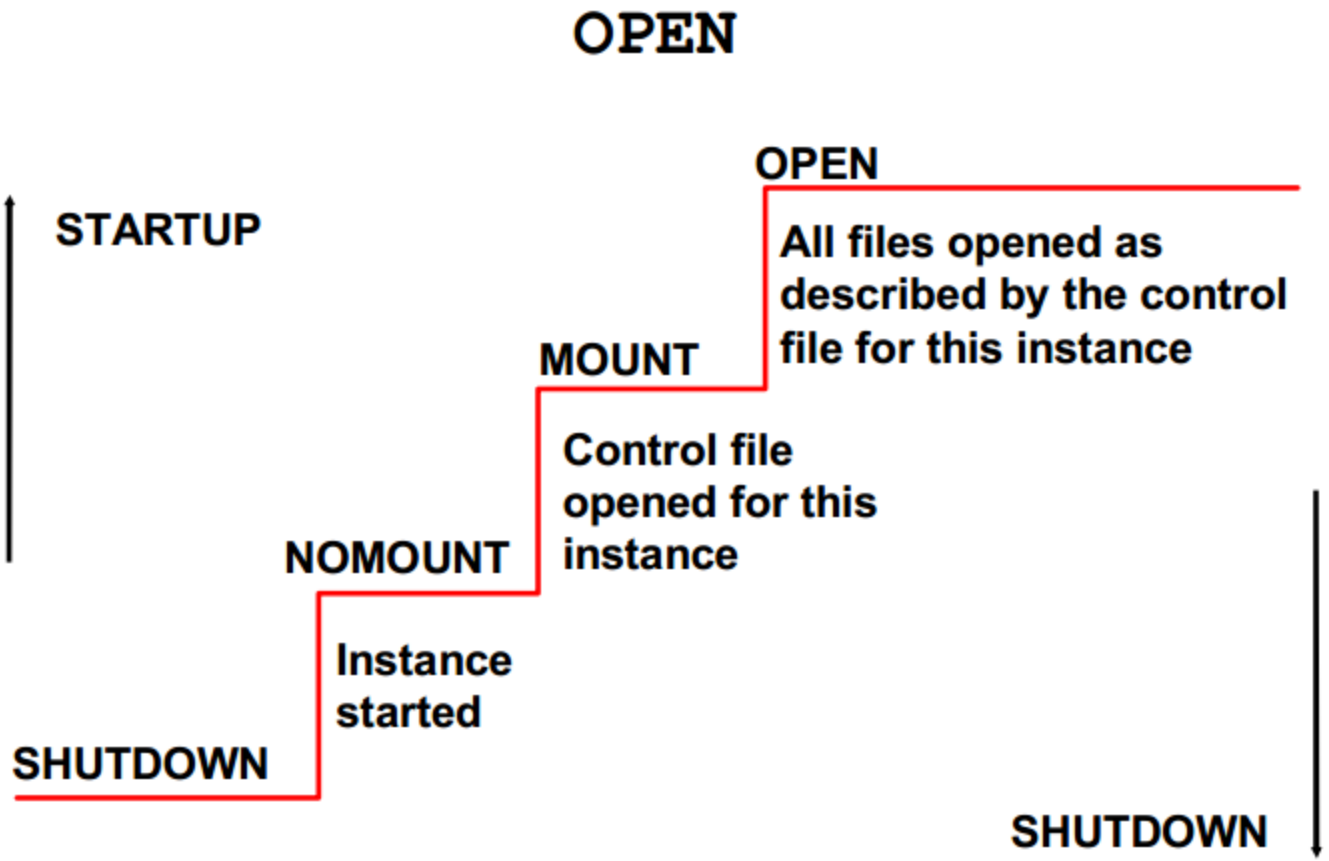


# Startup and Shutdown

| Syntax | Description |
|---|---|
| **STARTUP** | If you specify only STARTUP with no other options, then the instance starts, then mounts and open the database |
| **DBA** | Restricts access to users with the RESTRICTED SESSION privilege. |
| **FORCE** | If the database is open, then FORCE shuts down the database with a SHUTDOWN ABORT statement before re-opening it. If the database is closed, then FORCE opens the database. |
| **MOUNT** | Starts the instance, then mounts the database without opening it |
| **NOMOUNT** | Starts the instance without mounting the database. If no parameter file exists, then RMAN starts the instance with a "dummy" parameter file. You can then run RESTORE SPFILE to restore a backup server parameter file. |
| **PFILE = 'filename'** | Specifies the filename of the init.ora file for the target database. If this parameter is not specified, then the default init.ora filename is used. |

# Startup and Shutdown

- When starting the database, you select the state in which it starts.



# Startup and Shutdown

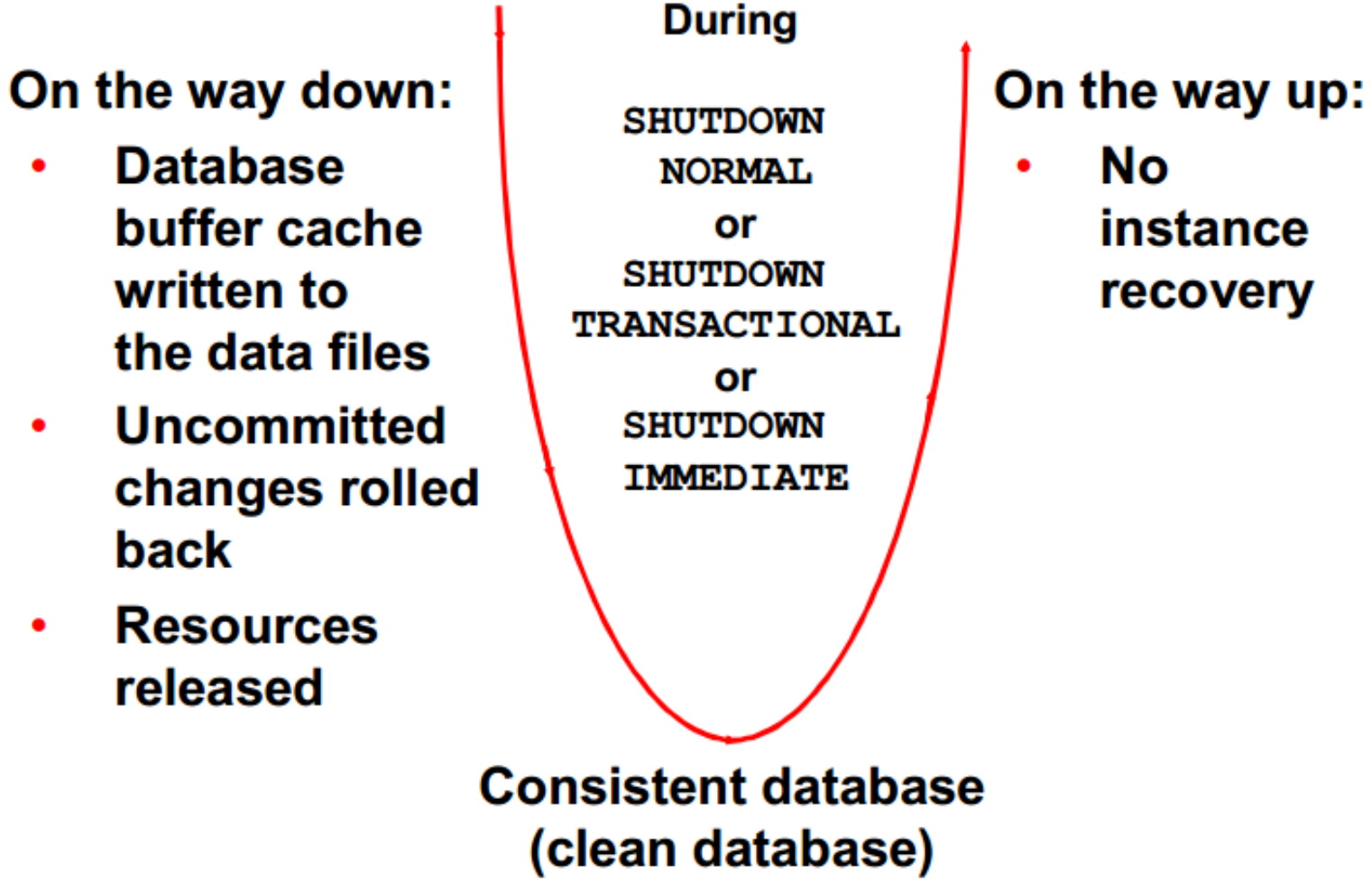
| Shutdown Mode | A | I | T | N |
|---|---|---|---|---|
| Allow new connections | No | No | No | No |
| Wait until current sessions end | No | No | No | Yes |
| Wait until current transactions end | No | No | Yes | Yes |
| Force a checkpoint and close files | No | Yes | Yes | Yes |

- **Shutdown mode:**
  - **A = ABORT**
  - **I = IMMEDIATE**
  - **T = TRANSACTIONAL**
  - **N = NORMAL**

# Startup and Shutdown

- Shutdown the database to make operating system offline backups of all physical structures and to have modified static initialization parameters take effect when restarted.
- To shutdown an instance you must connect as SYSOPER or SYSDBA and use the following command: SHUTDOWN [NORMAL | TRANSACTIONAL| IMMEDIATE |ABORT ]

# Startup and Shutdown



# Startup and Shutdown

- **SHUTDOWN NORMAL:** Normal is the default shutdown mode. Normal database shutdown proceeds with the following conditions:
  - No new connections can be made.
  - The Oracle server waits for all users to disconnect before completing the shutdown.
  - Database and redo buffers are written to disk.
  - Background processes are terminated, and the SGA is removed from memor y.
  - Oracle closes and dismounts the database before shutting down the instance.
  - The next startup doesnot require an instance recovery.

# Startup and Shutdown

- **SHUTDOWN TRANSACTIONAL:** A transactional shutdown prevents clients from losing work. A transactional database shutdown proceeds with the following conditions:
  - No client can start a new transaction on this particular instance.
  - A client is disconnected when the client ends the transaction that is in progress.
  - When all transactions have finished, a shutdown occurs immediatel y.
  - The next startup does not require an instance recovery.

# Startup and Shutdown

- **SHUTDOWN IMMEDIATE:** Immediate database shutdown proceeds with the following conditions:
  - Current SQL statements being processed by Oracle are not completed.
  - The Oracle server does not wait for the users, who are currently connected to the database, to disconnect.
  - Oracle rolls back active transactions and disconnects all connected users.
  - Oracle closes and dismounts the database before shutting down the instance.
  - The next startup does not require an instance recovery.

# Startup and Shutdown

- **SHUTDOWN ABORT:** If the NORMAL and IMMEDIATE shutdown options do not work, you can abort the current database instance. Aborting an instance proceeds with the following conditions:
  - Current SQL statements being processed by the Oracle server are immediately terminated.
  - Oracle does not wait forusers currently connected to the database to disconnect.
  - Database and redo buffers are not written to disk.
  - Uncommitted transactions arenot rolled back.
  - The instance is terminated without closing the files.
  - The database is not closed ordismounted.
  - Thenext startup requires instance recovery, which occurs automatically.

# Creating a New Tablespace

```
CREATE TABLESPACE ETRAINNING DATAFILE
'D:\oradata\oracle\ ETRAINNING.DBF' SIZE 100M
AUTOEXTEND ON NEXT 100M MAXSIZE 2048M;
/
CREATE TABLESPACE HR_STANFORD DATAFILE
'D:\oradata\oracle\HR_STANFORD.DBF' SIZE 500M
AUTOEXTEND ON NEXT 100M MAXSIZE 2048M;
```