

# Physical Schema

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WEEK 04

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## Week 4 – The Oracle Physical Schema

Last week we looked over the details of the Oracle instance architecture. Now it's time to see how the Oracle database is organized internally.

### Prepare VM

As usual, ensure that you're working on the "week2" snapshot, where Oracle is already installed.

```
[root@orasrv ~]# week2.sh
```

### The Oracle Database

**Outside view (physical level):** Locate the datafiles, the redo-log files and the control-file. Identify also the SPFILE. What are those files and how are they managed by the Oracle instance?

**From the inside (logical level):** General overview on tablespaces, segments, extends and oracle blocks. The relationship among these structures.

### Tablespaces

- Identify the system provided tablespaces: SYSTEM, SYSAUX, UNDO and TEMP.
- Query the dictionary to get info about existing tablespaces.

### Segments

- What is an Oracle segment?
- Segment types
- The STORAGE clause
- The HWM concept
- Relevant system views in the dictionary

### Database Blocks

- The Oracle block anatomy
- The ROWID

### Hands-on Practical Session

1. Create a tablespace
2. Create segments in this new tablespace
3. Illustrate the HWM concept

### Tuning the Physical Schema

- Dedicated tablespaces (speed, HA)
- The partitioning concept
- Buffer pool caching
- Clustered Tables

### Extra Reading

- On FEAA portal: W04\_schema\_fizica\_ro.pdf