

## Query#1 - Execution Plan - All Rows

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PROVS
- AQS\_INTERNET\_AGENTS
- AQS\_QUEUE\_TABLES
- AQS\_QUEUES
- AQS\_SCHEDULES
- CARDS
- CELL
- CITTA
- CREDITS
- DATA
- DEPT
- DIP
- EMP
- EXCEPTION\_LOG
- FATTI
- FLIGHTS
- GROUPBY\_MESE\_ANNO
- HELP

Report

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- Report dizionario dati
- Report OLAP
- Report TimesTen
- Report vista analitica

Foglio di lavoro Query Builder

0,077 secondi

SELECT \*  
FROM emp, dept  
WHERE emp.deptno = dept.deptno AND emp.job = 'ENGINEER';

Output script Explain plan

SQL 0,077 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST	
SELECT STATEMENT				5068	142
HASH JOIN				5068	142
Access Predicates					
EMP.DEPTNO=DEPT.DEPTNO					
TABLE ACCESS	DEPT	FULL		507	3
TABLE ACCESS	EMP	FULL		5078	139
Filter Predicates					
EMP_JOB='ENGINEER'					
Other XML					

Riga 3 colonna 57 Inserisci Modificato Windows: CR

## Query#1 - Execution Plan - First Rows

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PROVS
- AQS\_INTERNET\_AGENTS
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- AQS\_QUEUES
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Foglio di lavoro Query Builder

0,067 secondi

SELECT \* FROM emp, dept  
WHERE emp.deptno = dept.deptno AND emp.job = 'ENGINEER';

Output script Explain plan

SQL 0,067 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST	
SELECT STATEMENT				12	5
HASH JOIN				12	5
Access Predicates					
EMP.DEPTNO=DEPT.DEPTNO					
TABLE ACCESS	DEPT	FULL		507	3
TABLE ACCESS	EMP	FULL		12	2
Filter Predicates					
EMP_JOB='ENGINEER'					
Other XML					

Riga 1 colonna 25 Inserisci Modificato Windows: CR

## Query#2 - Execution Plan - Hash

The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema with tables like AQS\_INTERNET\_AGENT\_PROVS, AQS\_INTERNET\_AGENTS, AQS\_QUEUE\_TABLES, AQS\_QUEUES, AQS\_SCHEDULES, CARDS, CELL, CITTA, CREDITI, DATA, DEPT, DP, EMP, EXCEPTION\_LOG, FAITI, FLIGHTS, GROUPBY\_MESE\_ANNO, and HELP. The main pane shows the SQL query:

```
SELECT /*+ USE_HASH(e d) */ d.deptno, AVG(e.sal)
FROM emp e, dept d
WHERE d.deptno = e.deptno
GROUP BY d.deptno;
```

The execution plan is displayed in the bottom pane, showing a Hash join operation. The plan details are as follows:

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT			507	144
HASH JOIN			507	144
Access Predicates				
d.DEPTNO=ITEM_1				
INDEX	SYS_C0063105	FULL SCAN	507	1
VIEW	SYS_VW_GRC_3		508	143
HASH		GROUP BY	508	143
TABLE ACCESS	EMP	FULL	50111	139
Other XML				

## Query#2 - Execution Plan - No Hash

The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema with tables like AQS\_INTERNET\_AGENT\_PROVS, AQS\_INTERNET\_AGENTS, AQS\_QUEUE\_TABLES, AQS\_QUEUES, AQS\_SCHEDULES, CARDS, CELL, CITTA, CREDITI, DATA, DEPT, DP, EMP, EXCEPTION\_LOG, FAITI, FLIGHTS, GROUPBY\_MESE\_ANNO, and HELP. The main pane shows the SQL query:

```
SELECT /*+ NO_USE_HASH(e d) */ d.deptno, AVG(e.sal)
FROM emp e, dept d
WHERE d.deptno = e.deptno
GROUP BY d.deptno;
```

The execution plan is displayed in the bottom pane, showing a Nested Loops join operation. The plan details are as follows:

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT			507	143
NESTED LOOPS			507	143
VIEW	SYS_VW_GRC_3		508	143
HASH		GROUP BY	508	143
TABLE ACCESS	EMP	FULL	50111	139
INDEX	SYS_C0063105	UNIQUE SCAN	1	0
Access Predicates				
d.DEPTNO=ITEM_1				
Other XML				

## Query#3 - Execution Plan

Oracle SQL Developer : DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PROVS
- AQS\_INTERNET\_AGENTS
- AQS\_QUEUE\_TABLES
- AQS\_QUEUES
- AQS\_SCHEDULES
- CARDS
- CELL
- CITTA
- CREDITS
- DATA
- DEPT
- DIP
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- HELP

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Foglio di lavoro Query Builder

0,07 secondi

SELECT /\*+ NO\_OUTLINE (n d) \*/ e.name, job, sal, dname  
FROM emp e, dept d  
WHERE e.deptno = d.deptno  
AND NOT EXISTS  
(SELECT \* FROM salgrade WHERE e.sal = h1sal);

Output script SQL 0,07 secondi

OPERATION OBJECT\_NAME OPTIONS CARDINALITY COST

- SELECT STATEMENT 50012 551
- HASH JOIN RIGHT ANTI 50012 551
- Access Predicates  
E.SAL=H1SAL
- TABLE ACCESS SALGRADE FULL 999 3
- MERGE JOIN 50012 548
- TABLE ACCESS DEPT BY INDEX ROWID 507 4
- INDEX SYS\_C0063105 FULL SCAN 507 1
- SORT 50111 544
- Access Predicates  
E.DEPTNO=D.DEPTNO
- Filter Predicates  
E.DEPTNO=D.DEPTNO
- TABLE ACCESS EMP FULL 50111 139
- Other XNL

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## Query#4 - Execution Plan - Index on Sal

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PRIVS
- AQS\_INTERNET\_AGENTS
- AQS\_QUEUE\_TABLES
- AQS\_QUEUES
- AQS\_SCHEDULES
- CARDS
- CELL
- CITTA
- CREDITS
- DATA
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Foglio di lavoro Query Builder

```
select avg(e.sal)
from emp e
where e.deptno < 10 and
e.sal > 100 and e.sal < 200;
```

Output script Explain plan

SQL 0,02 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT				1 140
SORT		AGGREGATE	1	
TABLE ACCESS	EMP	FULL	57	140
Filter Predicates				
AND				
E.DEPTNO<10				
E.SAL<200				
E.SAL>100				
Other XMLE				

Riga 4 colonna 29 Interno Modificato Windows: CR

## Query#4 - Execution Plan - No index

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PRIVS
- AQS\_INTERNET\_AGENTS
- AQS\_QUEUE\_TABLES
- AQS\_QUEUES
- AQS\_SCHEDULES
- CARDS
- CELL
- CITTA
- CREDITS
- DATA
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Foglio di lavoro Query Builder

```
select avg(e.sal)
from emp e
where e.deptno < 10 and
e.sal > 100 and e.sal < 200;
```

Output script Explain plan

SQL 0,019 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT				1 140
SORT		AGGREGATE	1	
TABLE ACCESS	EMP	FULL	57	140
Filter Predicates				
AND				
E.DEPTNO<10				
E.SAL<200				
E.SAL>100				
Other XMLE				

Riga 4 colonna 29 Interno Modificato Windows: CR

## Query#5 - Execution Plan - Index on Job

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PRIVS
- AQS\_INTERNET\_AGENTS
- AQS\_QUEUE\_TABLES
- AQS\_QUEUES
- AQS\_SCHEDULES
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Foglio di lavoro Query Builder

```
select dname
from dept
where deptno in (select deptno
from emp
where job = 'PHILOSOPHER');
```

Output script x Explain plan x

SQL 0,02 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT			5	5
HASH JOIN		RIGHT SEMI	5	5
Access Predicates				
DEPTNO=DEPTNO				
TABLE ACCESS	EMP	BY INDEX ROWID BATCHED	5	2
INDEX	JOB_IDX	RANGE SCAN	5	1
Access Predicates				
JOB='PHILOSOPHER'				
TABLE ACCESS	DEPT	FULL	507	3
Other XNL				

Riga 5 colonna 28 | Inserisci | Modificato | Windows: CR

## Query#5 - Execution Plan - No Index

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PRIVS
- AQS\_INTERNET\_AGENTS
- AQS\_QUEUE\_TABLES
- AQS\_QUEUES
- AQS\_SCHEDULES
- CARDS
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Foglio di lavoro Query Builder

```
select dname
from dept
where deptno in (select deptno
from emp
where job = 'PHILOSOPHER');
```

Output script x Explain plan x

SQL 0,026 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT			5	142
HASH JOIN		RIGHT SEMI	5	142
Access Predicates				
DEPTNO=DEPTNO				
TABLE ACCESS	EMP	FULL	5	139
Filter Predicates				
JOB='PHILOSOPHER'				
TABLE ACCESS	DEPT	FULL	507	3
Other XNL				

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## Query#6 - Execution Plan - Index on Sal and Job

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PRIVS
- AQS\_INTERNET\_AGENTS
- AQS\_QUEUE\_TABLES
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Foglio di lavoro Query Builder

```
select e1.ename, e1.empno, e1.sal, e2.ename, e2.empno, e2.sal
from emp e1, emp e2
where e1.ename <> e2.ename and e1.sal < e2.sal
and e1.job = 'PHILOSOPHER' and e2.job = 'ENGINEER';
```

Output script x Explain plan x

SQL 0,07 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT			12664	144
MERGE JOIN			12664	144
SORT			5	3
TABLE ACCESS	EMP	BY INDEX ROWID BATCHED	5	2
INDEX	JOB_IDX	RANGE SCAN	5	1
Access Predicates		E1.JOB='PHILOSOPHER'		
FILTER				
Filter Predicates		E1.ENAME<>E2.ENAME		
Access Predicates		JOB	5078	140
Access Predicates		E1.SAL<E2.SAL		
Filter Predicates		E1.SAL<E2.SAL		
TABLE ACCESS	EMP	FULL	5078	139
Filter Predicates		E2.JOB='ENGINEER'		

Other XML

Riga 4 colonna 52 Interno Modificato Windows: CP

## Query#6 - Execution Plan - No Index

Oracle SQL Developer: DSTBD

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Connessioni Oracle

DSTBD

Tabelle (filtrate)

- AQS\_INTERNET\_AGENT\_PRIVS
- AQS\_INTERNET\_AGENTS
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- AQS\_QUEUES
- AQS\_SCHEDULES
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- CITTA
- CREDITS
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Foglio di lavoro Query Builder

```
select e1.ename, e1.empno, e1.sal, e2.ename, e2.empno, e2.sal
from emp e1, emp e2
where e1.ename <> e2.ename and e1.sal < e2.sal
and e1.job = 'PHILOSOPHER' and e2.job = 'ENGINEER';
```

Output script x Explain plan x

SQL 0,081 secondi

OPERATION	OBJECT_NAME	OPTIONS	CARDINALITY	COST
SELECT STATEMENT			12664	281
MERGE JOIN			12664	281
SORT			5	140
TABLE ACCESS	EMP	FULL	5	139
Filter Predicates		E1.JOB='PHILOSOPHER'		
FILTER				
Filter Predicates		E1.ENAME<>E2.ENAME		
SORT			5078	140
Access Predicates		E1.SAL<E2.SAL		
Filter Predicates		E1.SAL<E2.SAL		
TABLE ACCESS	EMP	FULL	5078	139
Filter Predicates		E2.JOB='ENGINEER'		

Other XML

Riga 4 colonna 52 Interno Modificato Windows: CP