

Select count(*) from prueba where	CLAVE=50000	DISPERSO=50000	CONCENTRADO=5	IDISPERSO=50000	ICONCENTRADO=5	BCONCENTRADO = 5
Plan	INDEX UNIQUE SCAN   PRUEBA_PK	TABLE ACCESS FULL   PRUEBA	TABLE ACCESS FULL   PRUEBA	INDEX RANGE SCAN  PID	INDEX RANGE SCAN  PIC	BITMAP INDEX SINGLE VALUE  PBC
A-time	00:00:00.01	00:00:00.06	00:00:00.05	00:00:00.01	00:00:00.07	00:00:00.01
Reads	3	2060	2260	3	84	8
"consistent gets"	109	2506	2452	116	267	179
"physical read total bytes"	352256	19005440	19005440	385024	2752512	2080768

system:

create user normal identified by normal;

grant dba to normal;

usuario normal:

create table PRUEBA (

clave NUMBER(16,0) primary key,

disperso NUMBER(16,0),

concentrado NUMBER(16,0),

idisperso NUMBER(16,0),

iconcentrado NUMBER(16,0),

bconcentrado NUMBER(16,0));

DECLARE

I NUMBER(16,0);

R NUMBER(16,0);

```
BEGIN
FOR I IN 1..500000 LOOP
R := DBMS_RANDOM.VALUE(1,1000000000);
INSERT INTO PRUEBA VALUES(I, R, MOD(R,11), 1000000000-R, MOD(1000000000-R, 11),
MOD(2000000000-R, 11));
END LOOP;
END;
/
```

```
create index PID on prueba(IDISPERSO);
```

```
create index PIC on prueba(ICONCENTRADO);
```

```
create bitmap index PBC on prueba(BCONCENTRADO);
```

```
SET AUTOTRACE ON;
```

```
ALTER SESSION SET STATISTICS_LEVEL='ALL';
```

```
ALTER SYSTEM FLUSH SHARED_POOL;
```

```
ALTER SYSTEM FLUSH BUFFER_CACHE;

SELECT COUNT(*) FROM PRUEBA WHERE CLAVE = 50000;

ALTER SYSTEM FLUSH SHARED_POOL;

ALTER SYSTEM FLUSH BUFFER_CACHE;

SELECT COUNT(*) FROM PRUEBA WHERE DISPERSO = 50000;

ALTER SYSTEM FLUSH SHARED_POOL;

ALTER SYSTEM FLUSH BUFFER_CACHE;

SELECT COUNT(*) FROM PRUEBA WHERE CONCENTRADO = 5;

ALTER SYSTEM FLUSH SHARED_POOL;

ALTER SYSTEM FLUSH BUFFER_CACHE;

SELECT COUNT(*) FROM PRUEBA WHERE IDISPERSO = 50000;

ALTER SYSTEM FLUSH SHARED_POOL;

ALTER SYSTEM FLUSH BUFFER_CACHE;

SELECT COUNT(*) FROM PRUEBA WHERE ICONCENTRADO = 5;

ALTER SYSTEM FLUSH SHARED_POOL;

ALTER SYSTEM FLUSH BUFFER_CACHE;

SELECT COUNT(*) FROM PRUEBA WHERE BCONCENTRADO = 5;


ALTER SYSTEM FLUSH SHARED_POOL;
```

```
ALTER SYSTEM FLUSH BUFFER_CACHE;  
UPDATE PRUEBA SET DISPERSO = DISPERSO + 7;  
ALTER SYSTEM FLUSH SHARED_POOL;  
ALTER SYSTEM FLUSH BUFFER_CACHE;  
UPDATE PRUEBA SET IDISPERSO = IDISPERSO + 7;
```

```
ALTER SYSTEM FLUSH SHARED_POOL;  
ALTER SYSTEM FLUSH BUFFER_CACHE;  
SELECT COUNT(*) FROM PRUEBA WHERE IDISPERSO BETWEEN 10000 AND 20000;
```

```
create index FIX on prueba(IDISPERSO+ICONCENTRADO);
```

```
SET AUTOTRACE ON;  
ALTER SESSION SET STATISTICS_LEVEL='ALL';
```

```
ALTER SYSTEM FLUSH SHARED_POOL;
```

```
ALTER SYSTEM FLUSH BUFFER_CACHE;
```

```
SELECT COUNT(*) FROM PRUEBA WHERE IDISPERSO BETWEEN 10000 AND 20000;
```

```
SET AUTOTRACE ON;
```

```
ALTER SESSION SET STATISTICS_LEVEL='ALL';
```

```
ALTER SYSTEM FLUSH SHARED_POOL;
```

```
ALTER SYSTEM FLUSH BUFFER_CACHE;
```

```
SELECT COUNT(*) FROM PRUEBA WHERE IDISPERSO+ICONCENTRADO BETWEEN 10000  
AND 20000;
```