

*** (10.2.0.4) Create a table based on dba_tables ordered by table_name so that all rows are tightly clustered on table_name

```
SQL> CREATE TABLE cf_test AS SELECT * FROM dba_tables ORDER BY table_name;
```

Table created.

*** Now create a concatenated index with the well clustering table_name column as the leading column

```
SQL> CREATE INDEX cf_test_good_i ON cf_test(table_name, num_rows);
```

Index created.

```
SQL> EXEC dbms_stats.gather_table_stats(ownname=>'BOWIE',
tabname=>'CF_TEST', estimate_percent=> null, cascade=> true,
method_opt=>'FOR ALL COLUMNS SIZE 1');
```

PL/SQL procedure successfully completed.

```
SQL> SELECT t.table_name, i.index_name, t.blocks, t.num_rows,
i.clustering_factor
FROM user_tables t, user_indexes i WHERE t.table_name = i.table_name
AND i.index_name='CF_TEST_GOOD_I';
```

TABLE_NAME	INDEX_NAME	BLOCKS	NUM_ROWS	CLUSTERING_FACTOR
CF_TEST	CF_TEST_GOOD_I	49	1644	49

*** The CF is perfect as expected, as all rows in the table are ordered in exactly the same manner as all the index entries

*** However, create the "same" index but with the column order reversed ...

```
SQL> CREATE INDEX cf_test_bad_i ON cf_test(num_rows, table_name);
```

Index created.

```
SQL> SELECT t.table_name, i.index_name, t.blocks, t.num_rows,
i.clustering_factor
FROM user_tables t, user_indexes i WHERE t.table_name = i.table_name
AND i.index_name='CF_TEST_BAD_I';
```

TABLE_NAME	INDEX_NAME	BLOCKS	NUM_ROWS	CLUSTERING_FACTOR
CF_TEST	CF_TEST_BAD_I	49	1644	543

*** And the CF is over 10 times worse than the other index as the index entries are no longer ordered in a similar manner as the table