

# Finding Greenplum distribution keys

By default the modified version of the `psql` command line used with Greenplum will show you the `DISTRIBUTED BY` clause of a table when you dump the table definition with `\d+`. However if your client is using the standard Postgres `psql` then this doesn't work. In order to find the definitive list of distribution keys you can query a combination of:

- `pg_class`
- `pg_namespace`
- `pg_attribute`
- `gp_distribution_policy`

The only trick here is there may be more than one distribution column, so the column `gp_distribution_policy.attrnums` is actually an array. We can query that using `ANY`, which Greenplum borrowed from Postgres.

```
SELECT n.nspname as schema
      , c.relname as table_name
      , c.oid
      , a.attnum
      , a.attname as dist_col
FROM pg_class c

JOIN pg_namespace n
  ON c.relnamespace = n.oid
 AND n.nspname = 'ctx'
 AND c.relname = 'mv_crods_client_group'

JOIN gp_distribution_policy d
  ON d.localoid = c.oid

JOIN pg_attribute a
  ON d.localoid = a.attrelid
 AND a.attnum = ANY (d.attrnums)
;
```

Example results:

schema	table_name	oid	attnum	dist_col
ctx	mv_crods_client_group	309005535	2	client_group_id
ctx	mv_crods_client_group	309005535	3	version

(2 rows)

This table will thus include the clause `DISTRIBUTED BY (client_group_id, version)`

Scriptable version:

```
SELECT n.nspname as schema
      , c.relname as table_name
      , c.oid
      , a.attnum
      , a.attname as dist_col
FROM   pg_class c

JOIN   pg_namespace n
      ON c.relnamespace = n.oid
      AND n.nspname = :sch
      AND c.relname = :obj

JOIN   gp_distribution_policy d
      ON d.localoid = c.oid

JOIN   pg_attribute a
      ON d.localoid = a.attrelid
      AND a.attnum = ANY (d.attrnums)

;
```

Then:

```
psql -h iagdcaprod.auiag.corp -U x123456 -d iadpprod -v sch="'ctx'" -v
obj="'mv_crods_client_group'" -f dist_key.sql
```