Greenplum常用命令、函数

- Greenplum常用查询命令

#查看test_bd事务(即数据库)下的所有表名包含 user 的 表信息

```
SELECT UPPER(A.SCHEMANAME) AS SCHEMANAME, UPPER(A.TABLENAME) AS TABLENAME,
D.ATTRELID,D.ATTRELID :: regclass, UPPER(D.ATTNAME) AS ATTNAME,
REPLACE(REPLACE(REPLACE(FORMAT_TYPE(D.ATTTYPID, D.ATTTYPMOD), 'numeric','NUMBER'),
'character varying','VARCHAR2'),'date','DATE') AS DATA_TYPE,E.DESCRIPTION
FROM PG_TABLES AS A
INNER JOIN PG_CLASS AS B ON A.TABLENAME = B.RELNAME
LEFT JOIN PG_CATALOG.PG_DESCRIPTION AS E ON B.OID = E.OBJOID
LEFT JOIN PG_CATALOG.PG_ATTRIBUTE AS D ON D.ATTRELID = E.OBJOID AND D.ATTNUM = E.OBJSUBID
WHERE SCHEMANAME ='test_bd'
AND A.TABLENAME LIKE '%user%'
AND D.ATTNUM > 0
ORDER BY A .TABLENAME,D.ATTNUM
```

```
select pg_size_pretty(pg_database_size('gp_db'));              #查看gp数据库大小

select gp_segment_id,count(*) from db_name.tb_name group by gp_segment_id;              #查看数据分布情况
```

1.创建数据库 createdb test_db;
2.删除数据库 dropdb test_db;
3.创建模式 create schema myschema;
4.删除模式 drop schema myschema;
5.创建用户 create user user_name with password '123456' ;
6.删除用户 drop user user_name;
7.查看系统用户信息 select usename from pg_user;
8.查看版本信息 select version();
9.打开psql交互工具 psql name_db;

10.执行sql文件 mydb=> \i basics.sql \i 命令从指定的文件中读取命令。
11.批量将文本文件中内容导入到wether表 copy weather from '/home/user/weather.txt';
12.查看搜索模式 show search_path;
13.设置搜索模式 set search_path to myschema,public;
14.创建表空间 create tablespace spacename_tb location 'file_path';
15.显示默认表空间 show default_tablespace;
16.设置默认表空间 set default_tablespace=表空间名称;
17.指定用户登录 psql mtps -u
18.显示当前系统时间 select now() ;
19.配置plpgsql语言 create language 'plpgsql' handler plpgsql_call_handler;
20.删除规则 drop rule name on relation [cascade | restrict];

21.当前日期属于一年中第几周 select extract(week from timestamp '2020-06-14');
22.查询表是否存在 select * from pg_statio_user_tables where relname='test_tb';
23.导出表 ./pg_dump -p 端口号 -u 用户 -t 表名称 -f 备份文件位置 数据库 ;
24.整个数据库导出 pg_dumpall -d -p 端口号 -h 服务器ip -u postgres(用户名) > /home/xiaop/all.bak
25.数据库备份恢复 psql -h 192.168.0.48 -p 5433 -u postgres
26.数据库备份 pg_dumpall -h 192.168.0.4 -p 5433 -u postgres >/databack/postgresql2020061401.dmp
27.当前日期函数 select current_date;
28.返回第十条开始的5条记录 select * from tbname limit 5 offset 10;
29.查看数据库大小 select pg_size_pretty(pg_database_size('mtps')) as fulldbsize;
30.查看数据库表大小 select pg_size_pretty(pg_total_relation_size('test_db.t_l_collectfile')) as fulltblsize,pg_size_pretty(pg_relation_size('test_db.t_l_collectfile')) as justthetblsize;

31.设置执行超过指定秒数的sql语句输出到日志 log_min_duration_statement = 3
32.超过一定秒数sql自动执行执行计划 shared_preload_libraries = 'auto_explain',custom_variable_classes = 'auto_explain',auto_explain.log_min_duration = 4s
33.数据库备份

```
select pg_start_backup('backup baseline');
select pg_stop_backup();
recovery.conf
restore_command='cp /opt/buxlog/%f %p'
```

34.数据字典查看表结构 select column_name, data_type from information_schema.columns where table_name = 'test_tb';
35.查询表结构 select a.attnum,a.attname as field,t.typname as type,a.attlen as length,a.atttypmod as lengthvar,a.attnotnull as notnull from pg_class c,pg_attribute a,pg_type t where c.relname=表名称and a.attnum > 0 and a.attrelid = c.oid and a.atttypid = t.oid
36.将查询结果直接输出到文件，在psql中 \o 文件路径

```
select datname,rolname from pg_database a left outer join pg_roles b on a.datdba=b.oid; \o
```

37.查询数据库所有则　　select datname,rolname from pg_database a left outer join pg_roles b on a.datdba=b.oid ;
38.结束正在执行的事务　　select * from pg_stat_activity;
39.查看被锁定表

select pg_class.relname as table, pg_database.datname as database, pid, mode, granted from pg_locks, pg_class, pg_database where pg_locks.relation = pg_class.oid and pg_locks.database = pg_database.oid;

40.查看客户端连接情况　　select client_addr ,client_port,waiting,query_start,current_query from pg_stat_activity;
41.常看数据库.conf配置　　show all;

修改数据库postgresql.conf参数
修改postgresql.conf内容 pg_ctl reload
回滚日志强制恢复 pg_resetxlog -f 数据库文件路径

- Greenplum常用命令与MySQL对比

(1)列出所有的数据库
mysql: show databases
psql: \l或\list
(2)切换数据库
mysql: use dbname
psql: \c dbname

(3)列出当前数据库下的数据表
mysql: show tables
psql: \d

(4)列出指定表的所有字段
mysql: show columns from table name
psql: \d tablename

(5)查看指定表的基本情况
mysql: describe tablename
psql: \d+ tablename

(6)退出登录
mysql: quit 或者\q
psql:\q

- Greenplum常用调优命令

```
netstat -ano|grep 5432 -wc                                  #查看连接5432端口线程数
psql -d gpdatabase -h master_host -p 5432 -U gpadmin        #连接数据库
psql gpdb_name                                              #连接gpdb_name数据库
vacuum table_name                                           #清除数据库碎片

#查看索引的大小
select pg_size_pretty(pg_relation_size('ind_t_id'));
    pg_restore -d test_db test_db.dump                      #导入dump数据
    pg_dump -U gpadmin -Fc test_db > test.dump              #导入dump数据
```

gp数据导入:

```
psql -h localhost -p 5432 -d test_db -U gpadmin -c "\\copy tablename FROM '/home/user/test.csv' with DELIMITER as ',' NULL as 'null string'"
psql -d test_db -h localhost -p dd -c "\copy(select * from ods.ods_dPmytest)to /home/gpadmin/loadout/test_db.csv"
```

gp数据备份:

```
gp_dump database_name;
```

COPY TO　　把一个表的所有内容都拷贝到一个文件，COPY只能用于表，不能用于视图。
COPY FROM　　从一个文件里拷贝数据到一个表里(把数据附加到表中已经存在的内容里)。
COPY user_tb TO '/tmp/data/test.csv' WITH csv;导出表数据
COPY user_tb FROM '/tmp/data/test.csv' WITH csv;导入表数据
使用select命令
COPY (select * from user_tb create_time > '2019-08-16 00:00:00' and create_time < '2019-08-17 00:00:00') TO '/tmp/data/user_20190816.csv' with csv;

- Greenplum常用窗口函数

row_number() over(partition by XXX order by XXX desc);　　-- 生成序列号

max() over(partition by XXX order by XXX);　　--取最大值
avg() over(partition by XXX order by XXX);　　--取平均值