# 1 Mariadb 10.2

Mariadb10.2 之后开始支持virtual column, virtual column可以根据json中的字段设置值。在virtual column上建立索引可以实现和postgresql在json字段上建立索引的效果，并且对查询性能的提升远高于postgresql

Mariadb与mysql不能安装在一个环境中，mariadb操作等命令都是mysql的命令，在安装mysql时会自动卸载mariadb

# 2 测试查询性能代码

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| **import** pymysql **import** random **import** time db = pymysql.connect(host = **"192.168.40.129"**, user=**"root"**,passwd = **"password"**,db = **"mysql"**) cur = db.cursor() *# cur.execute("drop table api") # cur.execute("create table api(attr varchar(1024),CHECK (JSON\_VALID(attr)));") # # cursor.execute("insert into api values('{\"name\": \"zx\", \"school\":\"nwpu\"}')") # cur.execute("alter table api add name varchar(26) as (JSON\_VALUE(attr, \'$.name\'));")* cur.execute(**"select JSON\_VALUE(attr,\'$.name\') from api"**)  rows = cur.fetchall() names = set() **for** i **in** range(0, len(rows)):  names.add(rows[i][0])  print(len(names)) *# for i in range(294367): # name = "".join(random.sample('zyxwvutsrqponmlkjihgfedcba',26)) # school = "".join(random.sample('zyxwvutsrqponmlkjihgfedcba',26)) # # print(name,school) # print(i) # if not name in names: # names.add(name) # cur.execute("insert into api(attr) values('{\"name\": \""+name+"\", \"school\":\"" + school + "\"}')")* cur.execute(**"explain select \* from api where name = \'"** + list(names)[2] + **"\';"**) *# print(len(names))* tol\_time = 0 time\_start = time.time() **for** i **in** range(1000):  name = list(names)[random.randint(1, len(names))]  *#print(name)* cur.execute(**"select \* from api where name = \""** +name+**"\";"**)  time\_end = time.time() print(time\_end - time\_start) *# print(tol\_time/1000) # print(rows)* db.commit() db.close() |

# 3 json index性能测试

170.5563588142395\*10

6.104268550872803