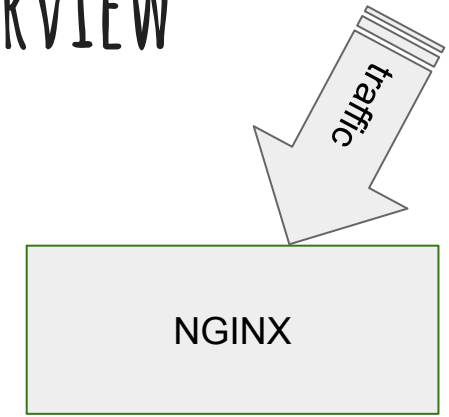
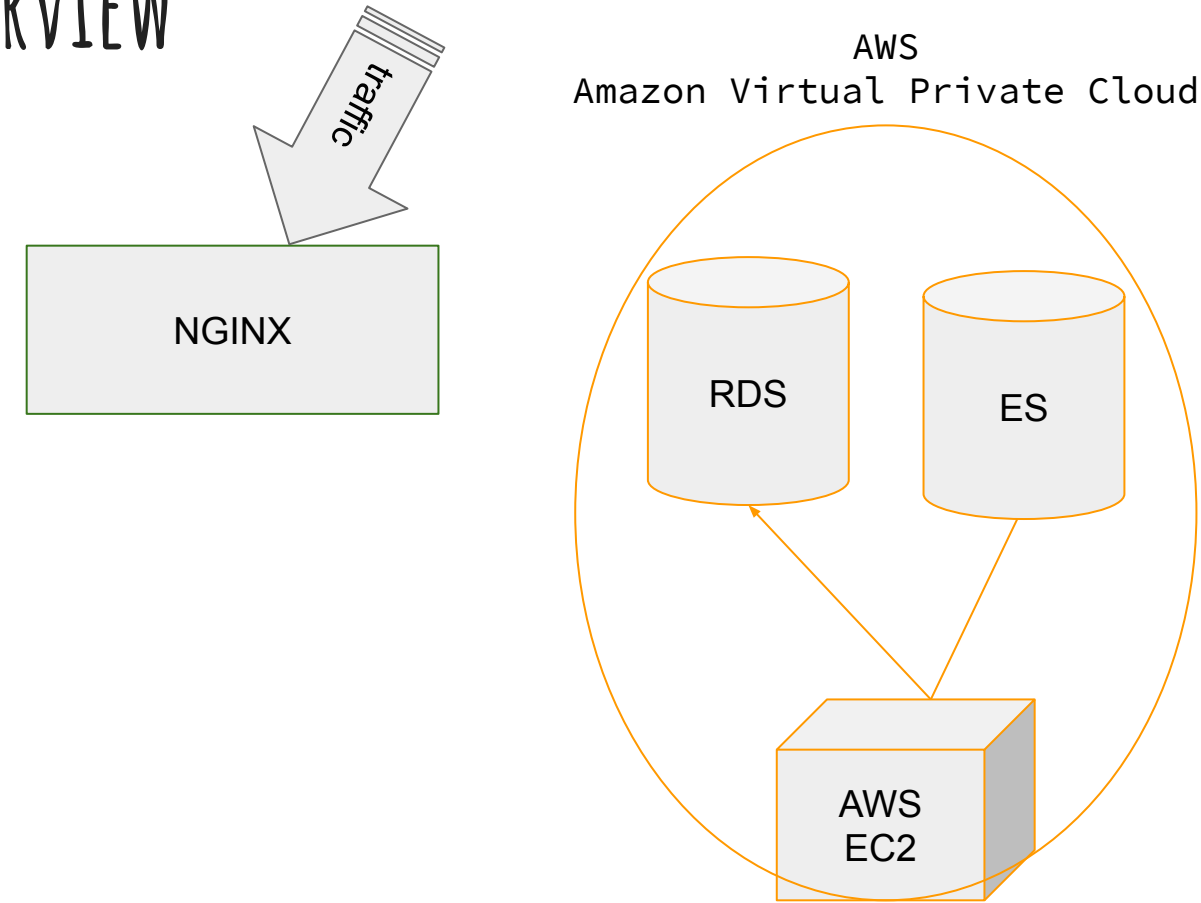
30ms. How much does it cost?

Feb 2020, Vitalii Melnychuk

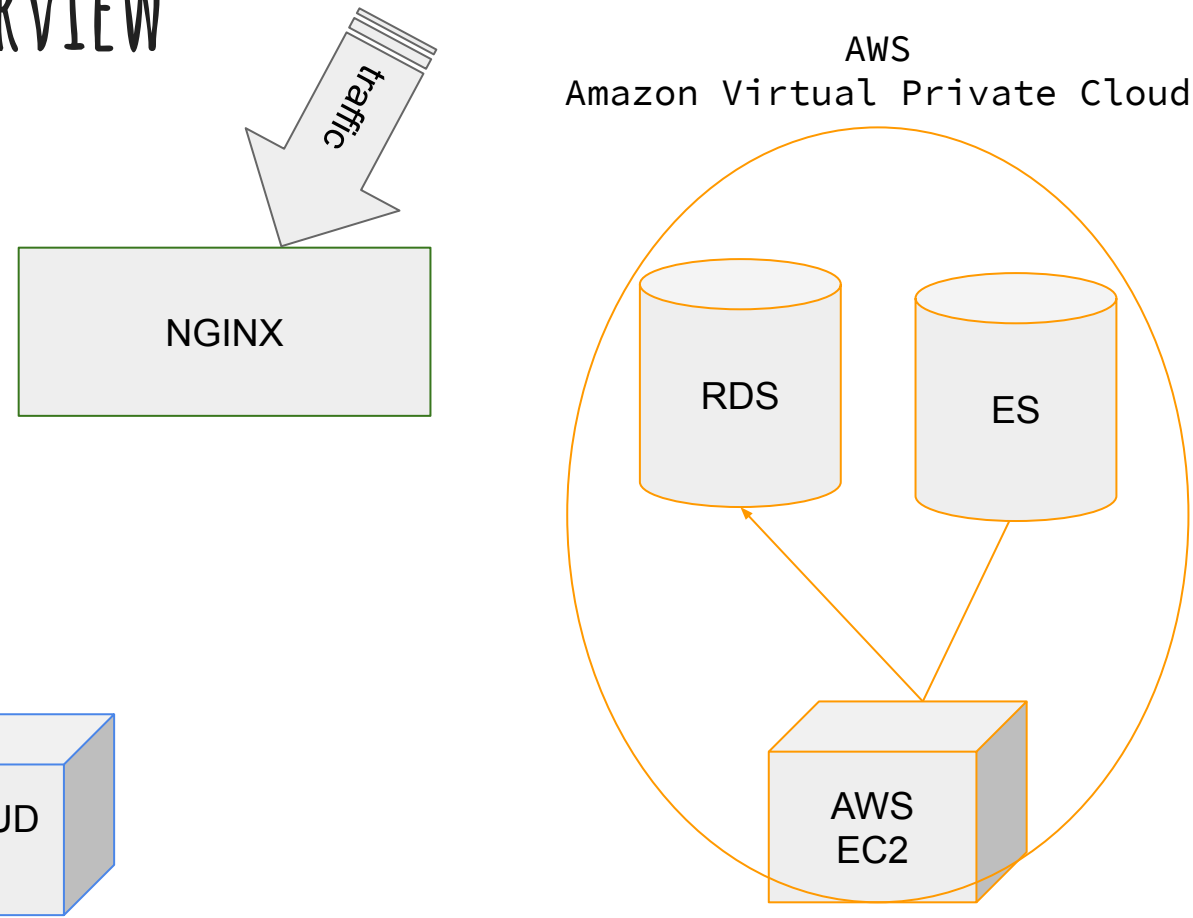
Infrastructure overview



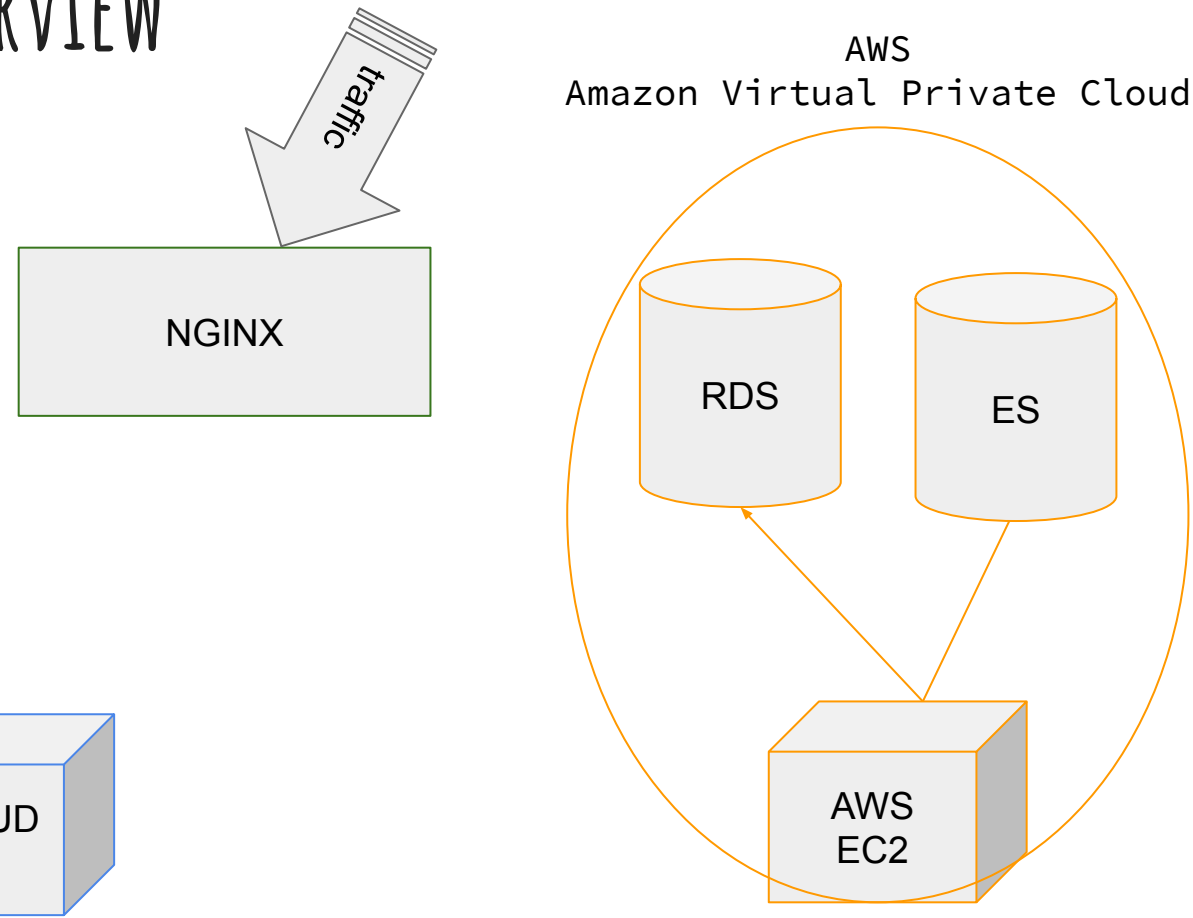
Infrastructure overview



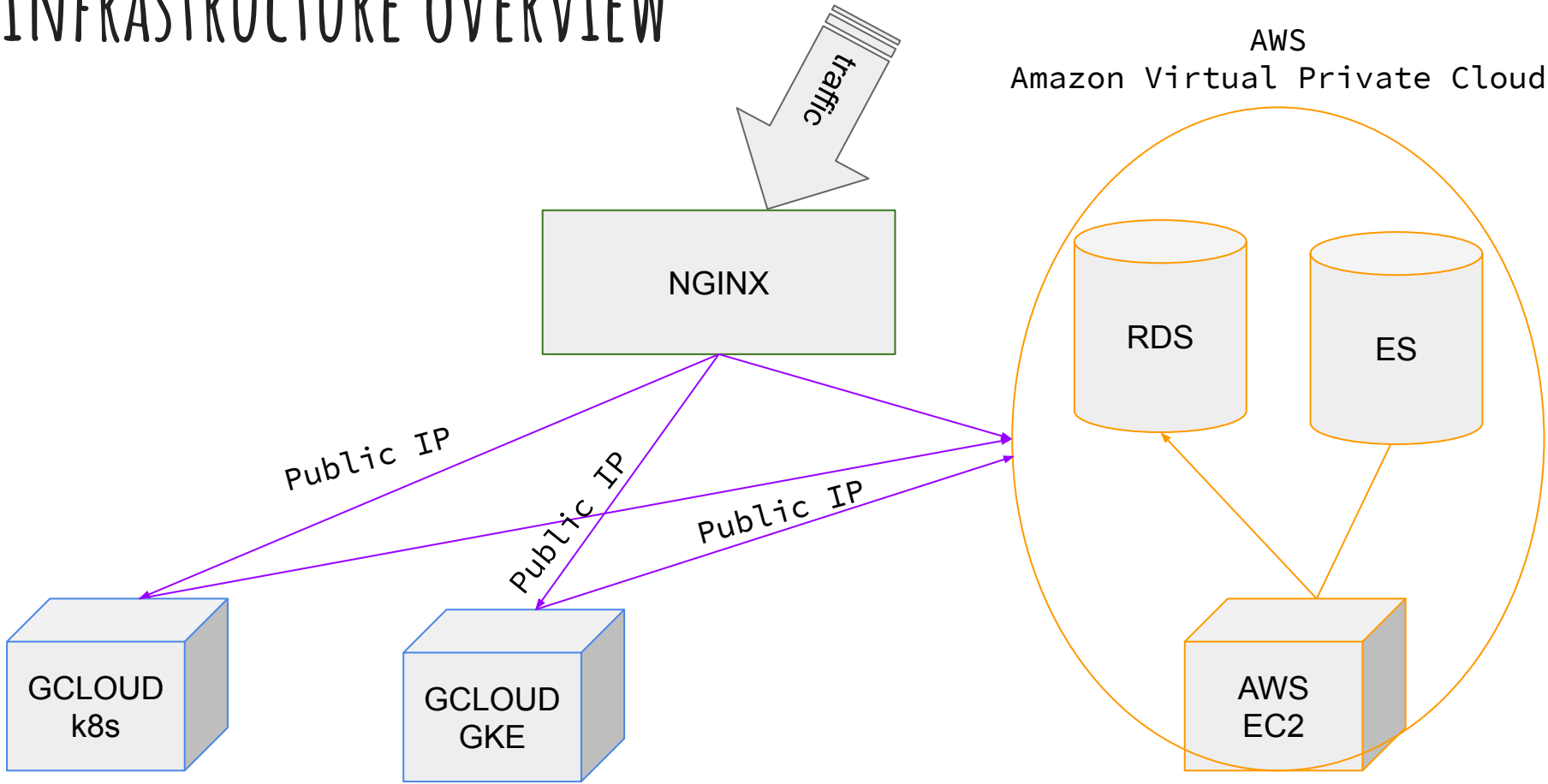
Infrastructure overview



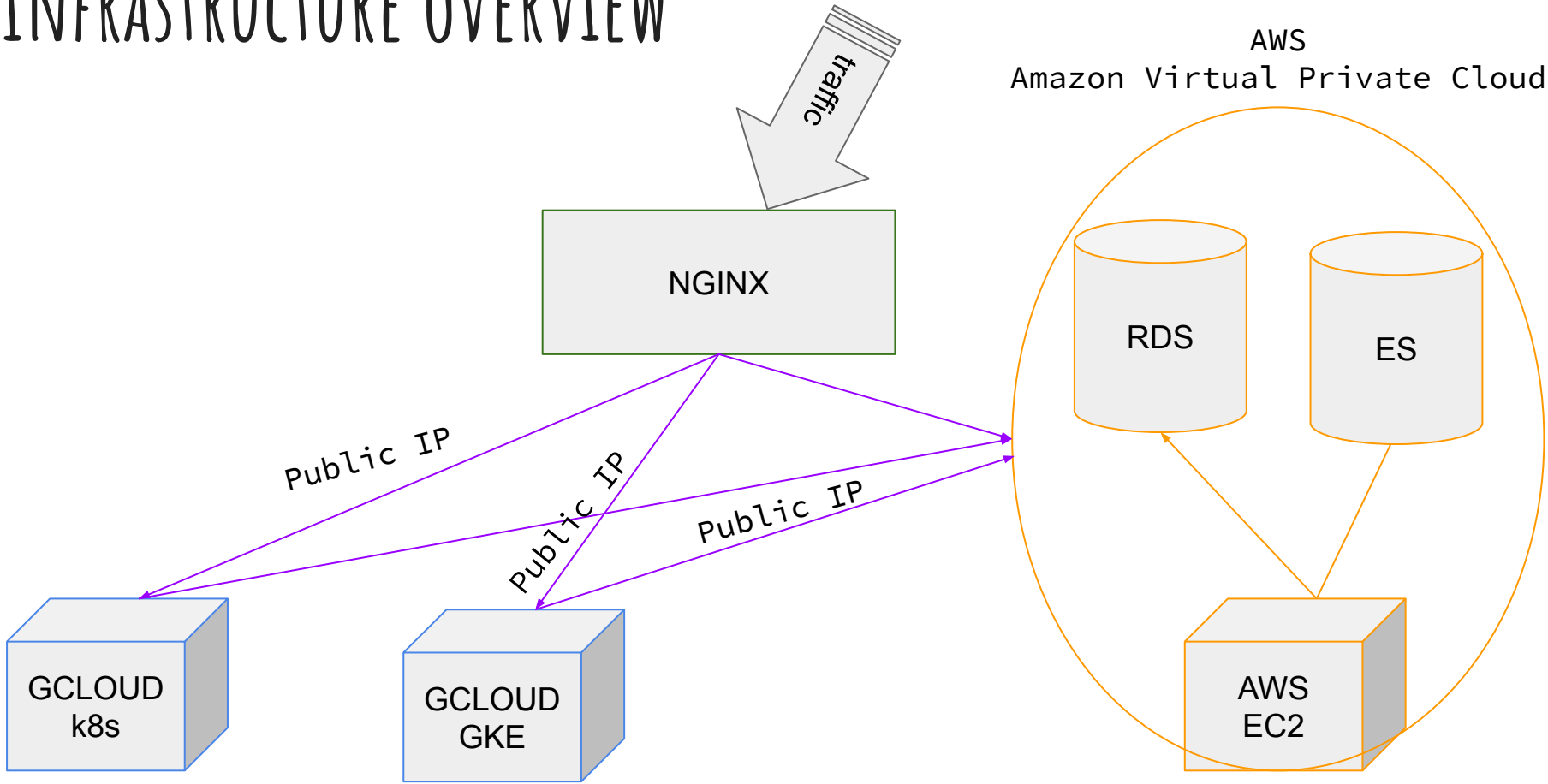
Infrastructure overview



Infrastructure overview



Infrastructure overview



```
location ~ ^/test-k8s-page {
    proxy_set_header X-Real-IP $remote_addr;
    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
    proxy_set_header X-Forwarded-Proto $http_x_forwarded_proto;
    proxy_set_header Host $host;
    proxy_pass http://34.34.1.2;
}
```

```
location ~ ^/test-k8s-page {
    proxy_set_header X-Real-IP $remote_addr;
    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
    proxy_set_header X-Forwarded-Proto $http_x_forwarded_proto;
    proxy_set_header Host $host;
    proxy_pass http://34.34.1.2;
}
```

Ingress uses HTTP schema

```
location ~ ^/test-k8s-page {
    proxy_set_header X-Real-IP $remote_addr;
    proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
    proxy_set_header X-Forwarded-Proto $http_x_forwarded_proto;
    proxy_set_header Host $host;
    proxy_pass https://34.34.1.2;
}
```

Page LOAD

~3-5s

10 queries- 1s

10 queries- 1s

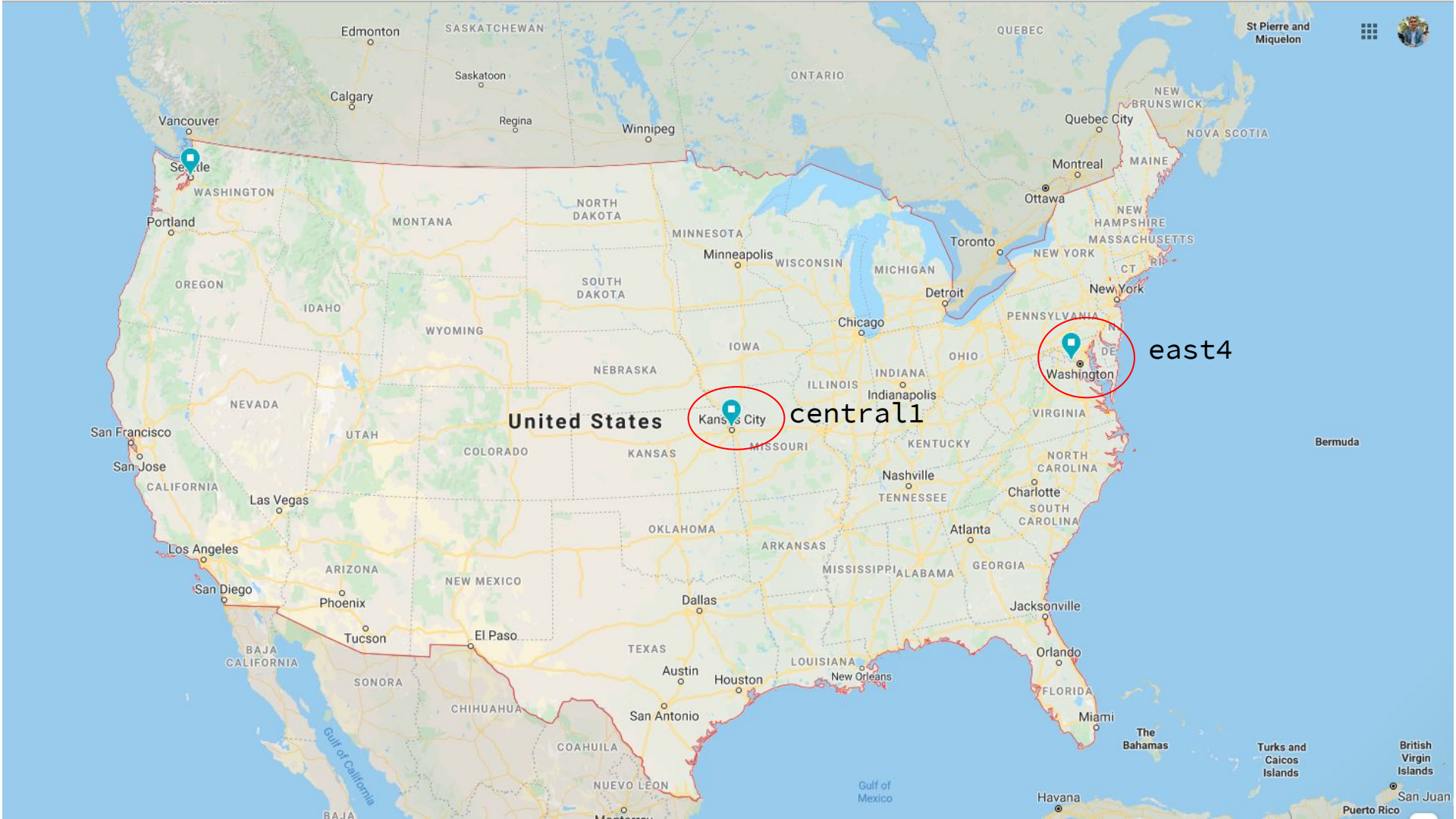
100 queries- 5s

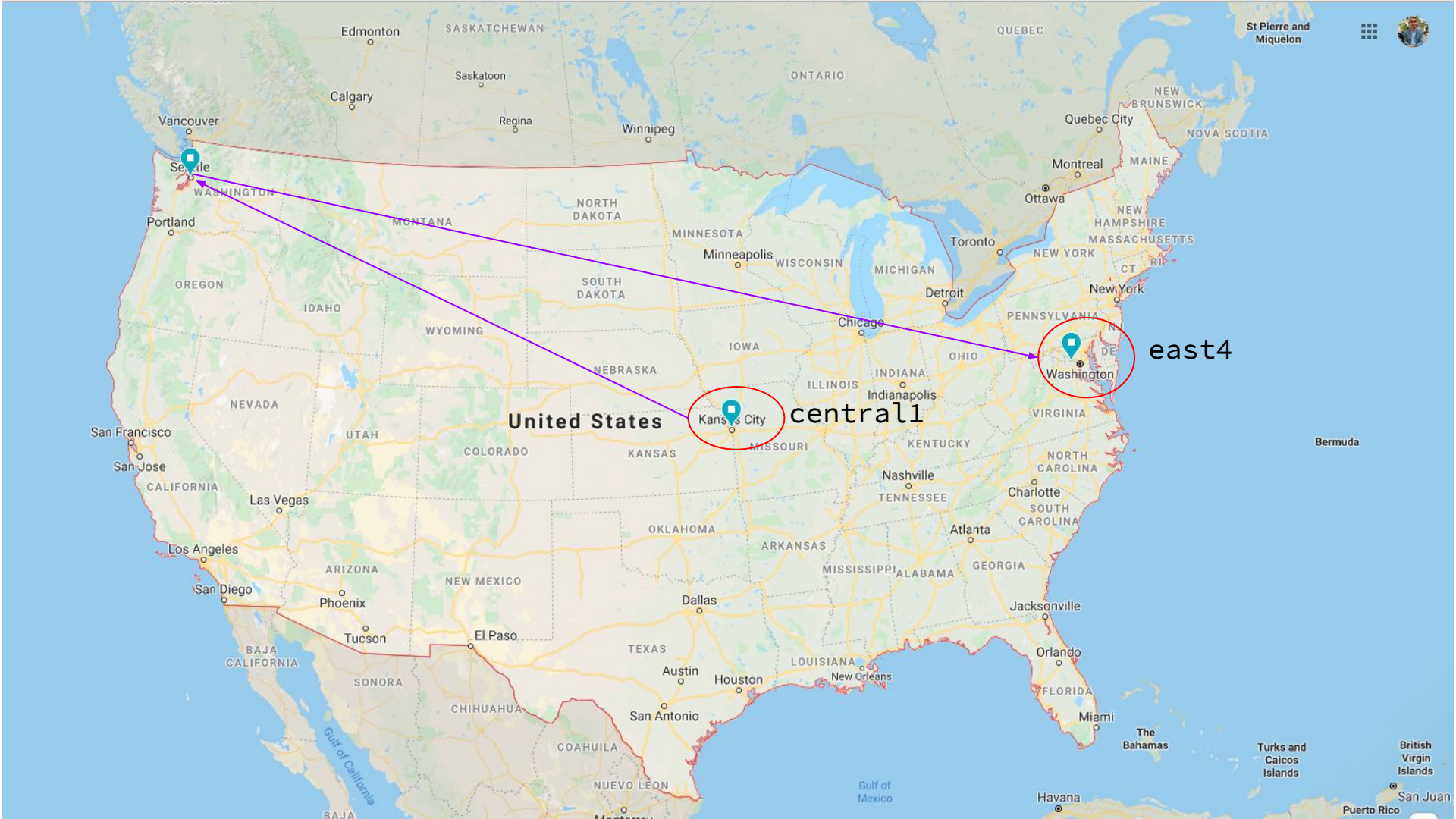
It's not About k8s performance

```
(central1) traceroute -p 3306 p8.db

 1  * 72.14.232.71 (72.14.232.71)  10.818 ms
 2  209.85.250.34 (209.85.250.34)  10.794 ms
 3  108.170.243.200 (108.170.243.200)  10.705 ms
 4  * * *
 5  52.93.249.91 (52.93.249.91)  11.714 ms
 6  150.222.212.23 (150.222.212.23)  11.058 ms
 7  * * *
 8  52.93.129.138 (52.93.129.138)  28.818 ms
 9  * 52.93.131.184 (52.93.131.184)  28.738 ms
10  * * *
11  * * *
20  * * 52.93.28.114 (52.93.28.114)  28.786 ms
21  * * *
22  * * *
23  * * *
24  * * *
25  52.93.28.74 (52.93.28.74)  28.775 ms * *
26  * * *
```

Edmonton
SASKATCHEWAN
QUEBEC
St Pierre and Miquelon
Saskatoon
ONTARIO
Calgary
NEW BRUNSWICK
Vancouver
Regina
Winnipeg
Quebec City
NOVA SCOTIA
Seattle
Montreal
MAINE
WASHINGTON
Ottawa
NORTH DAKOTA
NEW HAMPSHIRE
Portland
MONTANA
MINNESOTA
Toronto
MASSACHUSETTS
Minneapolis
NEW YORK
WISCONSIN
MICHIGAN
OREGON
SOUTH DAKOTA
Detroit
New York
IDAHO
Chicago
PENNSYLVANIA
WYOMING
IOWA
OHIO
NEBRASKA
Washington
ILLINOIS
INDIANA
Indianapolis
NEVADA
United States
VIRGINIA
Kansas City
San Francisco
UTAH
Bermuda
COLORADO
KANSAS
MISSOURI
KENTUCKY
San Jose
NORTH CAROLINA
CALIFORNIA
Nashville
Las Vegas
TENNESSEE
Charlotte
SOUTH CAROLINA
OKLAHOMA
Atlanta
Los Angeles
ARKANSAS
GEORGIA
ARIZONA
MISSISSIPPI
ALABAMA
San Diego
NEW MEXICO
Phoenix
Dallas
Jacksonville
Tucson
El Paso
TEXAS
BAJA CALIFORNIA
Orlando
LOUISIANA
Austin
Houston
New Orleans
SONORA
FLORIDA
CHIHUAHUA
San Antonio
Miami
The Bahamas
Turks and Caicos Islands
British Virgin Islands
COAHUILA
Gulf of California
Gulf of Mexico
NUEVO LEON
Havana
San Juan
Puerto Rico
BAJA


east4
central1
United States
Edmonton
SASKATCHEWAN
QUEBEC
St Pierre and Miquelon
Saskatoon
ONTARIO
Calgary
NEW BRUNSWICK
Vancouver
Regina
Winnipeg
Quebec City
NOVA SCOTIA
Montreal
MAINE
WASHINGTON
Ottawa
NORTH DAKOTA
NEW HAMPSHIRE
Portland
MONTANA
MINNESOTA
Toronto
MASSACHUSETTS
Minneapolis
NEW YORK
WISCONSIN
MICHIGAN
OREGON
SOUTH DAKOTA
Detroit
New York
IDAHO
Chicago
PENNSYLVANIA
WYOMING
IOWA
OHIO
NEBRASKA
INDIANA
Washington
ILLINOIS
Indianapolis
NEVADA
VIRGINIA
San Francisco
UTAH
COLORADO
KANSAS
MISSOURI
KENTUCKY
Bermuda
San Jose
NORTH CAROLINA
CALIFORNIA
Nashville
Charlotte
Las Vegas
TENNESSEE
SOUTH CAROLINA
OKLAHOMA
Atlanta
Los Angeles
ARKANSAS
MISSISSIPPI
ALABAMA
GEORGIA
ARIZONA
NEW MEXICO
San Diego
Phoenix
Dallas
Jacksonville
Tucson
El Paso
TEXAS
BAJA CALIFORNIA
Orlando
LOUISIANA
Austin
Houston
New Orleans
SONORA
FLORIDA
CHIHUAHUA
San Antonio
Miami
The Bahamas
Gulf of California
COAHUILA
Turks and Caicos Islands
British Virgin Islands
Gulf of Mexico
NUEVO LEON
Havana
San Juan
Puerto Rico
BAJA


east4
central1
United States
Edmonton
SASKATCHEWAN
Saskatoon
Calgary
Regina
Winnipeg
ONTARIO
QUEBEC
St Pierre and Miquelon
Vancouver
Quebec City
NEW BRUNSWICK
NOVA SCOTIA
Montreal
MAINE
Ottawa
Portland
WASHINGTON
MONTANA
NORTH DAKOTA
MINNESOTA
Minneapolis
Toronto
NEW HAMPSHIRE
MASSACHUSETTS
NEW YORK
WISCONSIN
MICHIGAN
OREGON
SOUTH DAKOTA
Detroit
New York
IDAHO
Chicago
PENNSYLVANIA
WYOMING
IOWA
OHIO
Washington
NEBRASKA
INDIANA
ILLINOIS
Indianapolis
NEVADA
Kansas City
VIRGINIA
San Francisco
UTAH
COLORADO
KANSAS
MISSOURI
KENTUCKY
Bermuda
San Jose
NORTH CAROLINA
CALIFORNIA
Nashville
Charlotte
Las Vegas
TENNESSEE
SOUTH CAROLINA
OKLAHOMA
Atlanta
Los Angeles
ARKANSAS
MISSISSIPPI
ALABAMA
GEORGIA
ARIZONA
San Diego
NEW MEXICO
Phoenix
Dallas
Jacksonville
Tucson
El Paso
TEXAS
BAJA CALIFORNIA
Austin
Houston
LOUISIANA
New Orleans
Orlando
SONORA
FLORIDA
CHIHUAHUA
San Antonio
Miami
The Bahamas
Turks and Caicos Islands
British Virgin Islands
COAHUILA
Gulf of California
Gulf of Mexico
NUEVO LEON
Havana
San Juan
Puerto Rico
BAJA

```
(east4) traceroute -p 3306 p8.db

 1  * * *
 2  * * *
 3  52.93.28.110 (52.93.28.110)  1.846 ms
 4  * * *
 5  * * *
```

DB Queries

Previous = 0,03s

Now = 0,001s