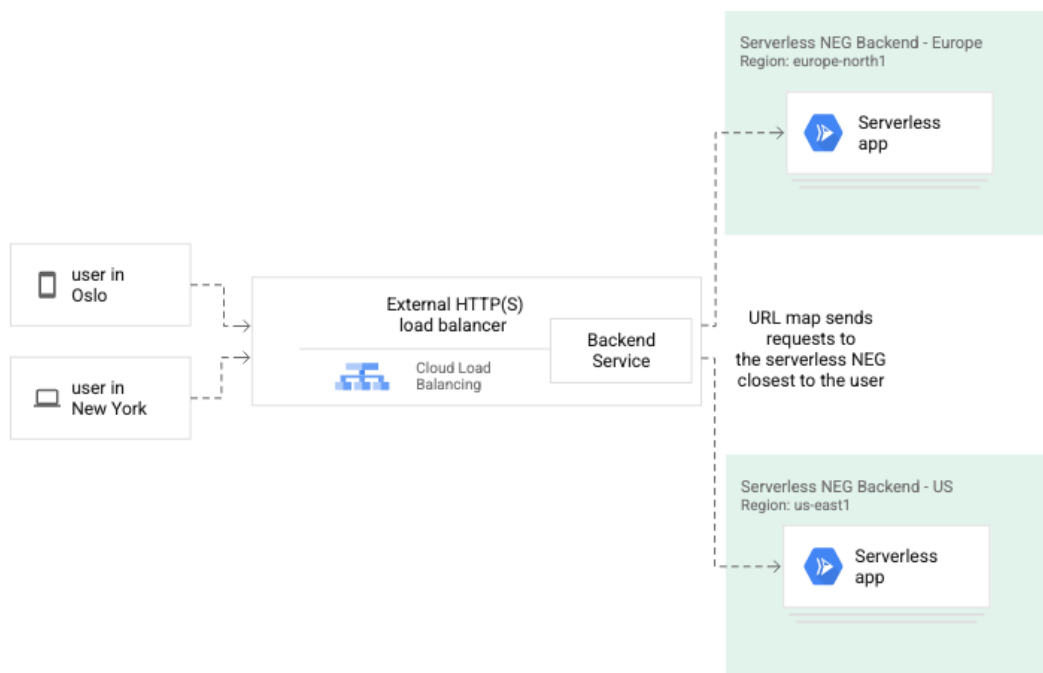# 通过Serverless NEG支持跨region的Cloud Run服务

官方的文档链接

https://cloud.google.com/load-balancing/docs/negs/setting-up-serverless-negs#multi_region_lb

创建CloudRun服务

1. 按照下面的示例程序, 部署两个helloworld应用，分别选择us-west1和us-east1作为region
   https://cloud.google.com/run/docs/quickstarts/build-and-deploy/python#writing

```
#修改源码中不同的region的返回结果，以区分在不同region部署的应用

import os

from flask import Flask

app = Flask(__name__)

@app.route("/")
def hello_world():
    name = os.environ.get("NAME", "World")
    return "Hello east {}!".format(name) #此处增加region信息

if __name__ == "__main__":
    app.run(debug=True, host="0.0.0.0", port=int(os.environ.get("PORT", 8080)))

gcloud run deploy --region us-east1
```

```
#同理修改us-west的代码，然后部署cloud run

gcloud run deploy --region us-west1
```

2. 部署之后，在cloudrun界面如下图所示：

		Name ↑	Req/sec ❓	Region	
☐	✅	helloworld	0	us-central1	
☐	✅	helloworld-east1	0	us-east1	
☐	✅	helloworld-invoker	0	us-central1	
☐	✅	helloworld-west1	0	us-west1	

创建http(s) load balancer

← Create a load balancer

HTTP(S) Load Balancing

Layer 7 load balancing for HTTP and HTTPS applications Learn more ↗

Configure

HTTP LB
HTTPS LB (includes HTTP/2 LB)

Options

Internet-facing or internal
Single or multi-region

START CONFIGURATION

← Create a load balancer

Please answer a few questions to help us select the right load balancing type for your application

Internet facing or internal only

Do you want to load balance traffic from the Internet to your VMs or only between VMs in your network?

◉ From Internet to my VMs
○ Only between my VMs

CONTINUE

← New HTTP(S) load balancer

| Name * | ❓ |

- ● Backend configuration
- ● Host and path rules
- ✓ Frontend configuration
- ⓘ Review and finalize (optional)

CREATE   CANCEL

Backend configuration

Create or select a backend service for incoming traffic. You can add multiple backend serv

Backend services & backend buckets *

| ☰ Filter |Type to filter |

No matches for ""

CREATE A BACKEND SERVICE   CREATE A BACKEND BUCKET

● 创建backend service

| Name * | ❓ |

| Description |

Backend type
Instance group ▾

| Protocol | Named port * |
| HTTP ▾ ❓ | http ❓ |

Timeout *
30   seconds ❓

Backends

New backend ⌄

Instance group * ▾

Port numbers *

Balancing mode ❓
- ⦿ Utilization
- ○ Rate

Maximum backend utilization *
80   % ❓

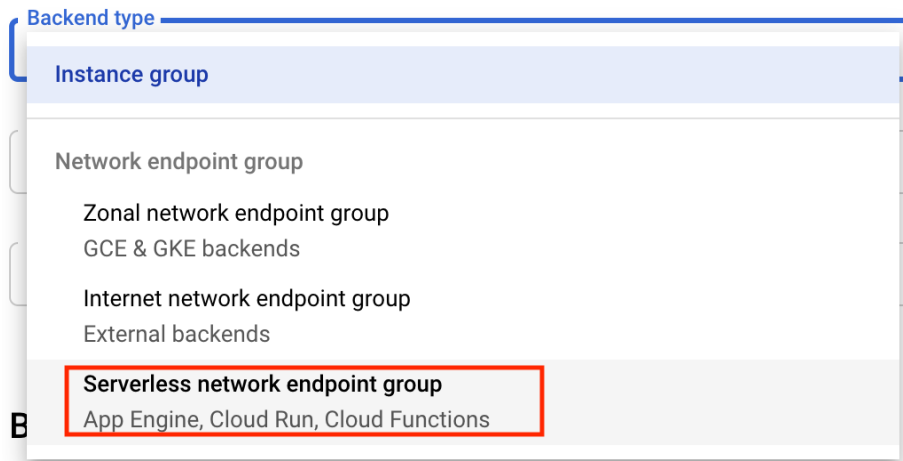| Maximum RPS   RPS ❓ | Scope
per instance ▾ |

Capacity
100   % ❓

CREATE   CANCEL

● Backend type选择 serverless network endpoint group

- Backend, New Backend中创建一个serverless neg，并选中指定region的cloudrun服务 helloworld-west1，点击Create，再点击Done.

Create Serverless network endpoint group

Name *
helloworld-west1 ❓

Region *
us-west1 (Oregon) ▼ ❓

Serverless network endpoint group type

🔘 Cloud Run ❓

　🔘 Select service name

　Service *
　helloworld-west1 (us-west1) ▼

　⚪ Use URL mask ❓

⚪ Cloud Functions ❓
⚪ App Engine ❓

[CREATE] CANCEL

- 同样的步骤创建第二个cloudrun服务 helloworld-east1。

- 给load balancer起一个名字，如cloudrun-multiregion-lb

● 返回load balancer页面，点击刚刚创建好的lb，查找frontend的ip

cloudrun-multiregion-lb

DETAILS	MONITORING	CACHING

Frontend

Protocol ↑	IP:Port	Certificate	SSL Policy	Network Tier ❓
HTTP	34.117.87.164:80	-		Premium

验证

● 创建两台不同region的VM，ssh进入VM后，访问LB的地址

● 可以看见当从us-east1访问时返回的是在较近region的cloudrun服务helloworld-east