eksctl create cluster --name demo-k8s-autoscaling --region ap-southeast-1 --nodegroup-name worker-nodes --node-type t3.small --nodes 2 --nodes-min 1 --nodes-max 4 --managed –spot

```
(base) PS C:\Users\elect> kubectl get nodes
NAME                                              STATUS   ROLES    AGE     VERSION
ip-192-168-15-18.ap-southeast-1.compute.internal  Ready    <none>   2m45s   v1.32.9-eks-c39b1d0
ip-192-168-41-176.ap-southeast-1.compute.internal Ready    <none>   2m45s   v1.32.9-eks-c39b1d0
(base) PS C:\Users\elect>
```

Tạo cluster

Deploy nginx


```
(base) PS E:\AWS-demo> kubectl apply -f demo.yaml
deployment.apps/php-apache created
service/php-apache created
(base) PS E:\AWS-demo> kubectl autoscale deployment php-apache --cpu-percent=50 --min=1 --max=10
Flag --cpu-percent has been deprecated, Use --cpu with percentage or resource quantity format (e.g., '70%' for utilization or '500m' for milliCPU).
horizontalpodautoscaler.autoscaling/php-apache autoscaled
```

Dùng 1 pod khác để bắn tải vào pod nginx

Kết quả pod nginx tăng replica từ 1 lên 6

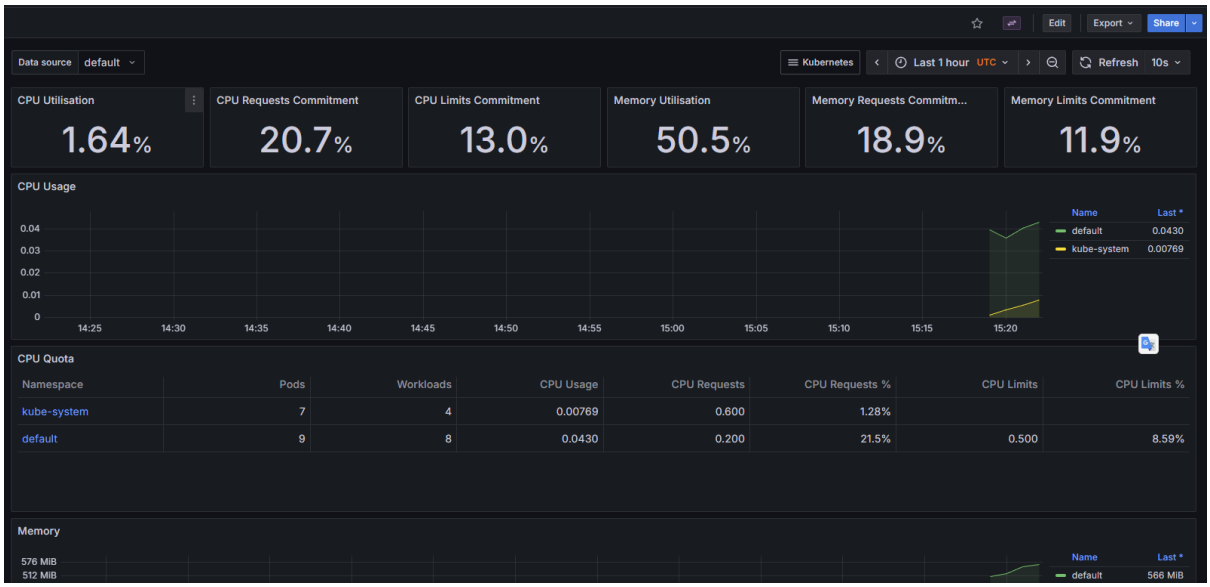
```
(base) PS E:\AWS-demo> kubectl get hpa -w
NAME         REFERENCE                  TARGETS              MINPODS   MAXPODS   REPLICAS   AGE
php-apache   Deployment/php-apache      cpu: <unknown>/50%   1         10        1          20s
php-apache   Deployment/php-apache      cpu: 0%/50%          1         10        1          31s
php-apache   Deployment/php-apache      cpu: 238%/50%        1         10        1          76s
php-apache   Deployment/php-apache      cpu: 250%/50%        1         10        4          91s
php-apache   Deployment/php-apache      cpu: 96%/50%         1         10        5          106s
php-apache   Deployment/php-apache      cpu: 64%/50%         1         10        6          2m1s
php-apache   Deployment/php-apache      cpu: 54%/50%         1         10        6          2m16s
```

helm repo add prometheus-community https://prometheus-community.github.io/helm-charts

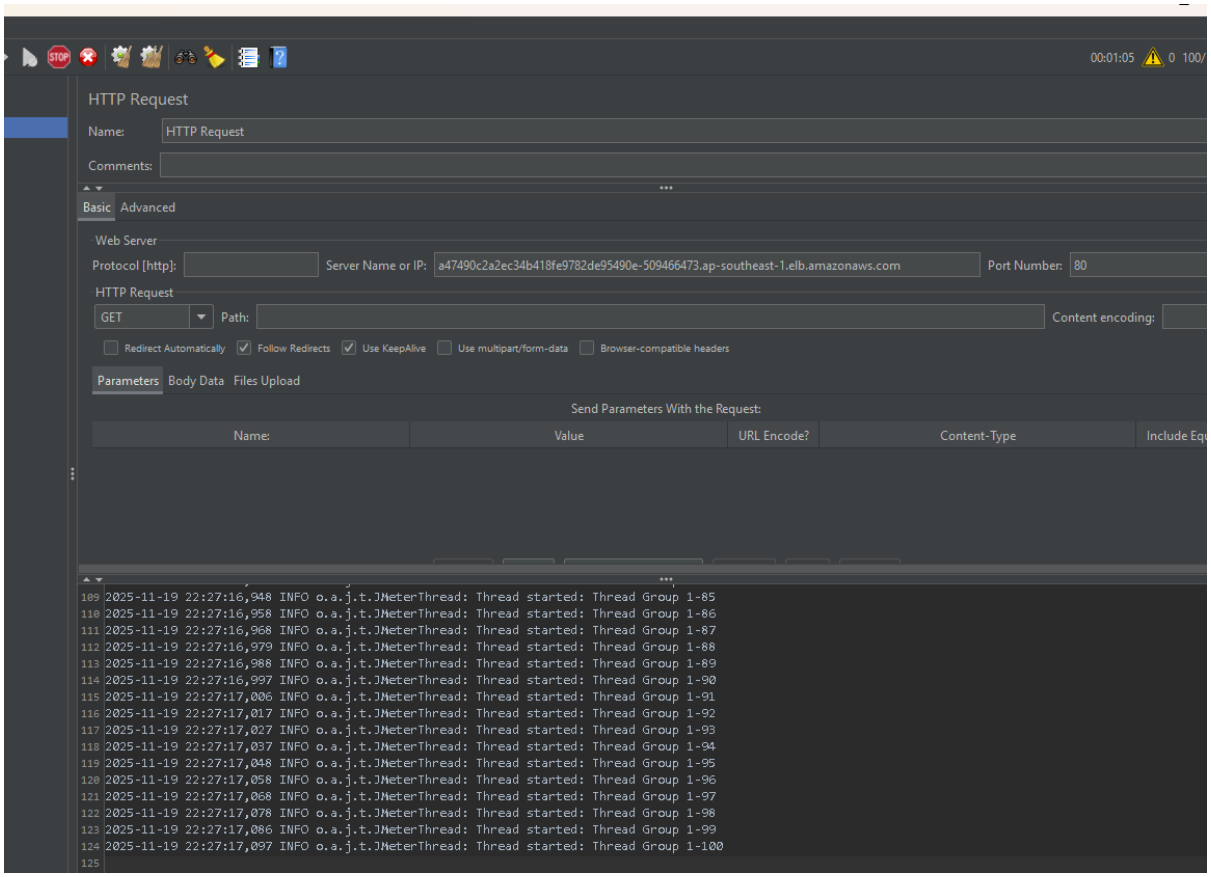
helm repo update

helm install monitor prometheus-community/kube-prometheus-stack --set grafana.adminPassword='admin'

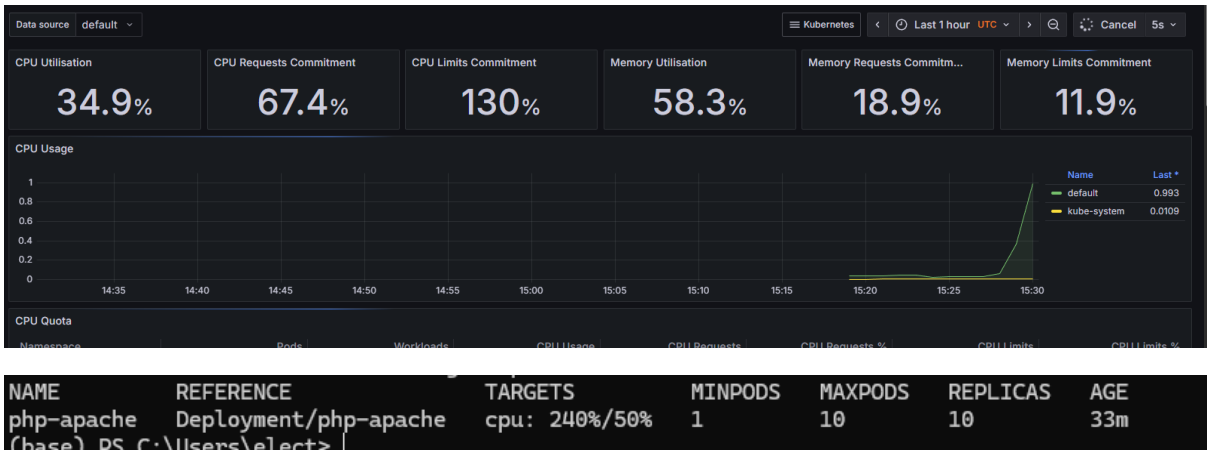
kubectl port-forward svc/monitor-grafana 3000:80 (forward ra local)



Dung Jmeter de test tai



CPU nhảy lên gần 100% và đã scale đủ 10 replica




```
NAME          REFERENCE                TARGETS          MINPODS   MAXPODS   REPLICAS   AGE
php-apache    Deployment/php-apache    cpu: 240%/50%    1         10        10         33m
(base) PS C:\Users\elect>
```