

# Q2: Horizontal Pod Autoscaler (HPA) Screenshots

## HPA Overview in Azure Portal

```
store-front-hpa Deployment/store-front cpu: 100%/75% 2 5 23m
munachiernest-eze@Munachis-MacBook-Pro BCDV4034-FinalExam % kubectl describe hpa store-front-hpa
Name: store-front-hpa
Namespace: default
Labels: app=store-front
Annotations: <none>
CreationTimestamp: Fri, 18 Jul 2025 21:16:01 -0400
Reference: Deployment/store-front
Metrics: ( current / target )
  resource cpu on pods (as a percentage of request): 100% (1m) / 75%
Min replicas: 2
Max replicas: 5
Behavior:
  Scale Up:
    Stabilization Window: 0 seconds
    Select Policy: Max
    Policies:
      - Type: Percent Value: 100 Period: 15 seconds
  Scale Down:
    Stabilization Window: 300 seconds
    Select Policy: Max
    Policies:
      - Type: Percent Value: 10 Period: 60 seconds
Deployment pods: 5 current / 5 desired
Conditions:
  Type      Status Reason Message
  -----
  AbleToScale True ReadyForNewScale recommended size matches current size
  ScalingActive True ValidMetricFound the HPA was able to successfully calculate a replica count from cpu resource utilization (percentage of request)
  ScalingLimited True TooManyReplicas the desired replica count is more than the maximum replica count
Events:
  Type Reason Age From Message
  ----
  Normal SuccessfulRescale 23m horizontal-pod-autoscaler New size: 2; reason: Current number of replicas below Spec.MinReplicas
  Warning FailedGetResourceMetric 23m (x2 over 23m) horizontal-pod-autoscaler failed to get cpu utilization: did not receive metrics for targeted pods (pods might be unready)
  Warning FailedComputeMetricsReplicas 23m (x2 over 23m) horizontal-pod-autoscaler invalid metrics (1 invalid out of 1), first error is: failed to get cpu resource metric value: failed to get cpu utilization: did not receive metrics for targeted pods (pods might be unready)
  Normal SuccessfulRescale 21m horizontal-pod-autoscaler New size: 3; reason: cpu resource utilization (percentage of request) above target
  Normal SuccessfulRescale 19m horizontal-pod-autoscaler New size: 4; reason: cpu resource utilization (percentage of request) above target
  Normal SuccessfulRescale 17m horizontal-pod-autoscaler New size: 5; reason: cpu resource utilization (percentage of request) above target
```

## HPA Configuration Details

```
munachiernest-eze@Munachis-MacBook-Pro BCDV4034-FinalExam % kubectl get hpa -o wide
NAME REFERENCE TARGETS MINPODS MAXPODS REPLICAS AGE
store-front-hpa Deployment/store-front cpu: 100%/75% 2 5 5 36m
munachiernest-eze@Munachis-MacBook-Pro BCDV4034-FinalExam %
```