

Todo Deployment

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: todo-redis-deployment
  labels:
    app: todo-redis
spec:
  replicas: 1
  selector:
    matchLabels:
      app: todo-redis
  template:
    metadata:
      labels:
        app: todo-redis
    spec:
      containers:
        - name: todo
          image: natawut/todo-service:release-2.1
          ports:
            - containerPort: 8000
          env:
            - name: REDIS_HOST
              value: "localhost"
        - name: redis
          image: redis:alpine
          ports:
            - containerPort: 6379
---
apiVersion: v1
kind: Service
metadata:
  name: todo-service
spec:
  selector:
    app: todo-redis
  ports:
    - protocol: TCP
      port: 80
      targetPort: 8000
  type: ClusterIP
```

Todo Ingress

```
apiVersion: networking.k8s.io/v1
kind: Ingress
```

```

metadata:
  name: todo-ingress
  annotations:
    nginx.ingress.kubernetes.io/rewrite-target: /
spec:
  ingressClassName: nginx
  rules:
    - host: localhost
      http:
        paths:
          - path: /
            pathType: Prefix
            backend:
              service:
                name: todo-service
                port:
                  number: 80

```

Nginx

```

Vivobook@Nacnano-ASUS-Laptop MINGW64 ~/github/my-chula-courses/2110415-soft-def-sys/activi
ty04 (main)
$ kubectl describe deployment nginx-deployment
Name: nginx-deployment
Namespace: default
CreationTimestamp: Mon, 15 Sep 2025 23:22:22 +0700
Labels: <none>
Annotations: deployment.kubernetes.io/revision: 1
Selector: app=nginx
Replicas: 2 desired | 2 updated | 2 total | 0 available | 2 unavailable
StrategyType: RollingUpdate
MinReadySeconds: 0
RollingUpdateStrategy: 25% max unavailable, 25% max surge
Pod Template:
  Labels: app=nginx
  Containers:
    nginx:
      Image: nginx:1.14.2
      Port: 80/TCP
      Host Port: 0/TCP
      Environment: <none>
      Mounts: <none>
      Volumes: <none>
      Node-Selectors: <none>
      Tolerations: <none>
Conditions:
  Type           Status  Reason
  ----           -
  Available      False   MinimumReplicasUnavailable
  Progressing    True    ReplicaSetUpdated
OldReplicaSets: <none>
NewReplicaSet:  nginx-deployment-647677fc66 (2/2 replicas created)
Events:
  Type           Reason             Age   From              Message
  ----           -
  Normal         ScalingReplicaSet  7s    deployment-controller  Scaled up replica set nginx-depl
oyment-647677fc66 from 0 to 2

```

Status

```
Vivobook@Nacnano-ASUS-Laptop MINGW64 ~/github/my-chula-courses/2110415-soft-def-sys/activi
ty04 (main)
$ kubectl get deployments
NAME                READY    UP-TO-DATE    AVAILABLE    AGE
nginx-deployment    2/2      2              2             60s
todo-redis-deployment 0/1      1              0             10s

Vivobook@Nacnano-ASUS-Laptop MINGW64 ~/github/my-chula-courses/2110415-soft-def-sys/activi
ty04 (main)
$ kubectl get services
kubectl get pods
kubectl get ingress
NAME                TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes          ClusterIP   10.96.0.1     <none>         443/TCP    7m11s
todo-service        ClusterIP   10.107.31.226 <none>         80/TCP     15s
NAME                READY    STATUS              RESTARTS    AGE
nginx-deployment-647677fc66-6mzl4 1/1      Running             0            66s
nginx-deployment-647677fc66-ljrb4 1/1      Running             0            66s
todo-redis-deployment-69fff96f55-nc1wx 0/2      ContainerCreating   0            16s
NAME                CLASS    HOSTS          ADDRESS    PORTS    AGE
todo-ingress        nginx    localhost      80         12s
```

Curl

```
Vivobook@Nacnano-ASUS-Laptop MINGW64 ~/github/my-chula-courses/2110415-soft-def-sys/activi
y04 (main)
curl -X POST -H "Content-Type: application/json" \
-d '{"title":"todo-1","detail":"the first todo","duedate":"2024-10-13 11:00:00","tags":[
,"completed":false}]' \
http://localhost/
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
00    112    100     8    100    104     629    8188  --:--:--  --:--:--  --:--:--  9333{"id":1}

Vivobook@Nacnano-ASUS-Laptop MINGW64 ~/github/my-chula-courses/2110415-soft-def-sys/activi
y04 (main)
curl http://localhost/
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
00    285    100    285     0     0   59030     0  --:--:--  --:--:--  --:--:--  71250[{"id":0,"ti
le":"grader","detail":"check time 2025-09-16 00:01:50.661437 +0700 +07 m=+1.277245501","c
ompleted":true,"duedate":"2025-09-16T00:01:50.661437+07:00","tags":[]},{ "id":1,"title":"to
o-1","detail":"the first todo","completed":false,"duedate":"2024-10-13T11:00:00","tags":[
]}
```