Create a pod with resource requests and limits

Create a namespace

# Create a Namespace so that the resources you are creating are isolated from the rest of other resources in the Cluster.

‘**kubectl create namespace cpu-example’**

You can create a Guaranteed or Burstable [Quality of Service](https://kubernetes.io/docs/tasks/configure-pod-container/quality-service-pod/) class pod by specifying requests and/or limits for a pod's containers.

Consider the following manifest for a pod that has one container.

|  |
| --- |
| Pods/qos/qos-pod-5.yaml  **apiVersion**: **v1**  **kind**: **Pod**  **metadata**:  **name**: **qos-demo-5**  **namespace**: **cpu-example**  **spec**:  **containers**  - **name**: **qos-demo-ctr-5**  **image**: **nginx**  **resources**:  **limits**:  **memory**: "200Mi"  **cpu**: "700m"  **requests**:  **memory**: "50mi"  **cpu**: "100m"  **controlledResources:** ["cpu", "memory"] |

Create the pod in the **cpu-example** namespace:

**kubectl create -f pods/qos/qos-pod-5.yaml**

This pod is classified as a Guaranteed QoS class requesting 700m CPU and 200Mi memory.

QoS = quality of service

View detailed information about the pod:

**kubectl get pod qos-demo-5 --output=yaml --namespace=cpu-example**

OutPut:

|  |
| --- |
| **resources:**  **limits:**  **cpu: "200m"**  **memory: “700mi”**  **requests:**  **cpu: 100m**  **memory: 500mi** |

Use **kubectl top** to fetch the metrics for the Pod:

**kubectl top pod qos-demo-5 --namespace=cpu-example**

This example output shows that the Pod is using 974 milliCPU, which is slightly less than the limit of 1 CPU specified in the Pod configuration.

|  |
| --- |
| NAME CPU(cores) MEMORY(bytes)  cpu-demo 974m <something> |

100 millicpu and 50 Mibibytes of Memory