



kubernetes

Kubernetes: Resource Quota

KUBERNETES : Administration

- When Kuberntes Cluster is being used as **Distributed**. I.e **Multiple Team, users** are working on Same Cluster then Resource Quota become very important.
- You can **limit the Resources** for user or Team.
- You can save the Cluster to being consumed by only one team or user.
- Administrator need to Devide the Cluster in **NameSpaces** and enable Resource Quota on it.
- This can be done via **ResourceQuota** or **ObjectQuota** Objects.

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- Each Pod can specify **RequestCapacity** and **ResourceLimit**.
- Request Capacity is an Resource Demand:
- **Scheduler** will manage the **Pod Placement** on the basis of Request Capacity.
- Resource Limit is a limit imposed on the Pod.
- Pod Container will not be allowed to use more resource as specified in resource Limit.
- User can use resource request like 200m. Which is 20% of single Core.
- User can put limit like 400m.
- Memory Quota Define like MiB or GiB.

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- If a **Capacity Quota** has been specified by the administrator, then **each Pod** needs to specify the Quota During the creation.
- The Administrator can specify default request value for Pods that don't specify and Capacity Value.
- Same is Applicable for Limit Quota.
- If a resource is requested more the Capacity then server API will give 403 FORBIDDEN error.

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- Administrator is allowed to set below limits on NameSpace:

Resource	Description
requests.cpu	The Sum of CPU requests of all Pods can't exceed to this Value.
requests.mem	The Sum of Memory requests of all Pods can't exceed to this Value.
requests.storage	The Sum of Storage requests of all PVC can't exceed to this Value.
limits.cpu	The Sum of CPU Limits of all Pods can't exceed to this Value.
limits.memory	The Sum of Memory Limits of all Pods can't exceed to this Value.

KUBERNETES : Administration

- Administrator is allowed to set below limits on NameSpace:

Resource	Description
Configmap	Total Number of configmaps can exists in a namespace.
Persistentvolumeclaims	Total Number of PVCs can exists in a namespace.
Pods	Total Number of Pods can exists in a namespace.
replicationControllers	Total Number of replicationControllers can exists in a namespace.
Services	Total Number of Services can exists in a namespace.
Loadbalancers	Total Number of loadbalancers can exists in a namespace.
Secrets	Total Number of secrets can exists in a namespace.

Will see you in Next Lecture...

Thank you!

A close-up photograph of a hand holding a black marker, writing the words 'Thank you!' in a cursive script on a white surface. The hand is positioned on the right side of the frame, with the fingers gripping the marker. The text is written in a fluid, handwritten style.

See you in next lecture ...