Set and Test Resource Quota and Limits on Projects

Lab 26

What are you Learning?

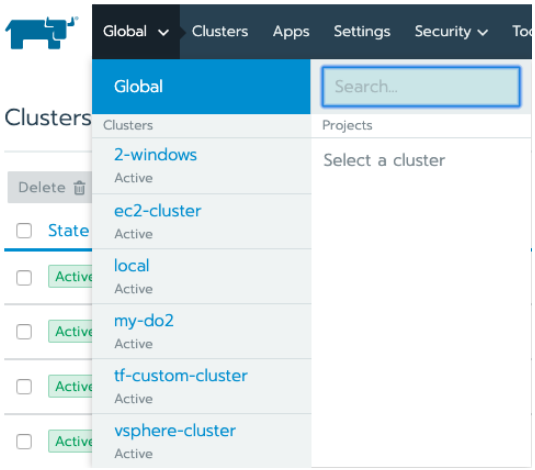
You will learn how to use resource quotas to limit cluster resource consumption on a per-project basis. You will also see how Namespaces inherit these values from the project.

Why is it important?

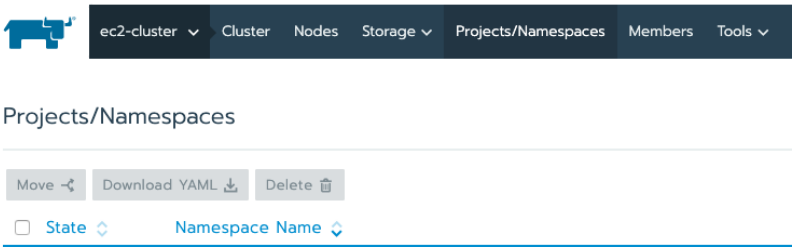
Managing resources is a key part of Kubernetes cluster operation. Resource quotas are a valuable tool for this, especially with a multi-tenant environment.

Working with Resource Management in Projects

1. In the Rancher UI Navigate to the cluster you would like to use for this exercise by selecting it from a list of clusters in the top left Menu



2. The top menu bar now reflects the available options in the cluster context. Select “Projects/Namespaces” from the top menu



3. Now from this page, we can choose a project to set resource quotas for. On the project of our choosing, select the three dots menu on the right and select “Edit”
4. In the edit project page, we can now add resource quotas to this project. Expand the “Resource Quotas” box and then select the “Add Quota” button.
5. Here you can choose from a variety of resources types you wish to apply a quota to. For today, lets choose “Memory Reservation”. Then set the value to 8GB. This means that all the pods in this project combined can reserve no more than 8GB of Memory.
6. Additionally we can set the “Container Default Resource Limit”. Unlike the quota we set before, this is a per pod level setting, that describes the default limit values that should

be set if the user omits this in their pod definition. However, a user can override this at any time by defining any value in their pod spec.

Testing That It Works

To test this works, try launching a deployment into this project that reserves over 10GB of Memory.

References

- Project Resource Quotas - https://rancher.com/docs/rancher/v2.x/en/project-admin/resource-quotas/