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## Demonstrate Exploring Quotas Lab

Scenario

In the scenario for this demonstration lab, a developer wants to deploy the cakephp-mysql-example application from a Git repository and review the different OpenShift resources created for it.

|  |  |
| --- | --- |
|  | You may have already done some of these demonstrations in earlier labs. If you have, you can skip them and use the existing project and deployment. |

## 1. Demonstrate Authentication to OpenShift Master

|  |  |
| --- | --- |
|  | Skip this section if you already executed the steps in previous demonstrations. |

1. Action: Log in to the OPENTLC shared OpenShift web console using either of these methods:
   * Method 1: Go to [https://master.na1.openshift.opentlc.com](https://master.na1.openshift.opentlc.com/)
   * Method 2: Use the command line from any host with the OpenShift client utility (oc) installed:

LocalMachine$ oc login https://master.na1.openshift.opentlc.com --username shacharb-redhat.com

Username: shacharb-redhat.com

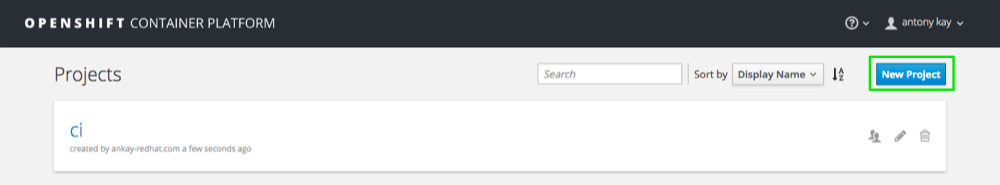
Password: \*\*\*\*\*\*\*\*\*\*

Logged into "https://master.na1.openshift.opentlc.com" as "shacharb-redhat.com" using existing credentials.

## 2. Demonstrate Creating a Project

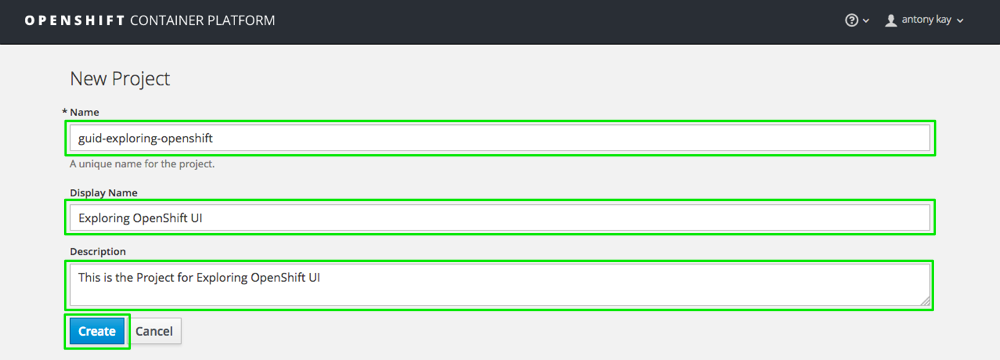
|  |  |
| --- | --- |
|  | Skip this section if you already executed the steps in previous demonstrations. |

1. Action: Click New Project to create a project for your demonstration:



* + Explain what projects are and how different projects can have different user permissions and quotas attached to them.

1. Action: Fill in the Name, Display Name, and Description fields:



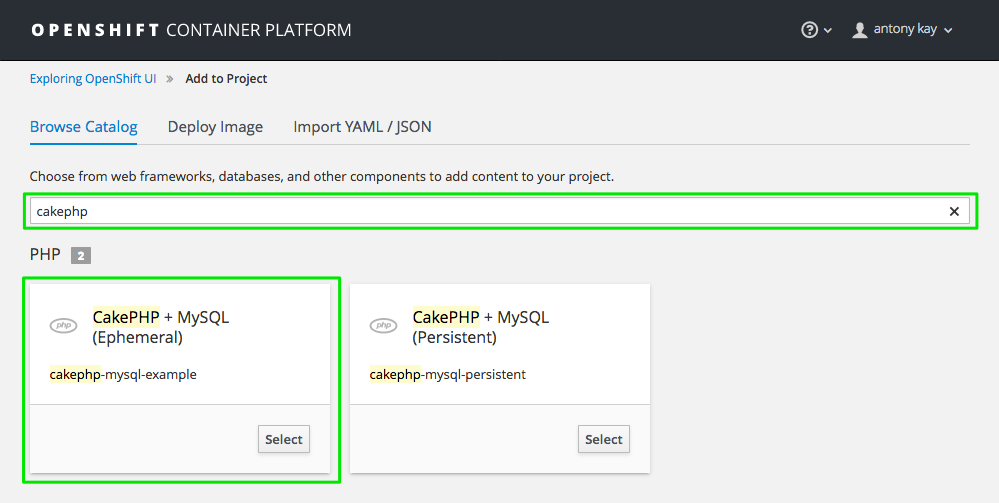
|  |  |
| --- | --- |
|  | Make sure you replace unique-id or GUID with a unique identifier (such as your client’s name). Project names must be unique in OpenShift. |

|  |  |
| --- | --- |
|  | Two other options for completing this task:   * Use the command line from any host with the OpenShift client utility (oc) installed:   [sborenst@ip-192-168-20-158 ~]$ oc new-project ${GUID}-exploring-openshift --description="This is the Project for exploring OpenShift UI" --display-name="Exploring OpenShift UI"  Now using project "guid-exploring-openshift" on server "https://master.na1.openshift.opentlc.com".   * Run the oc new-project ${GUID}-exploring-openshift command without the description and display name information. |

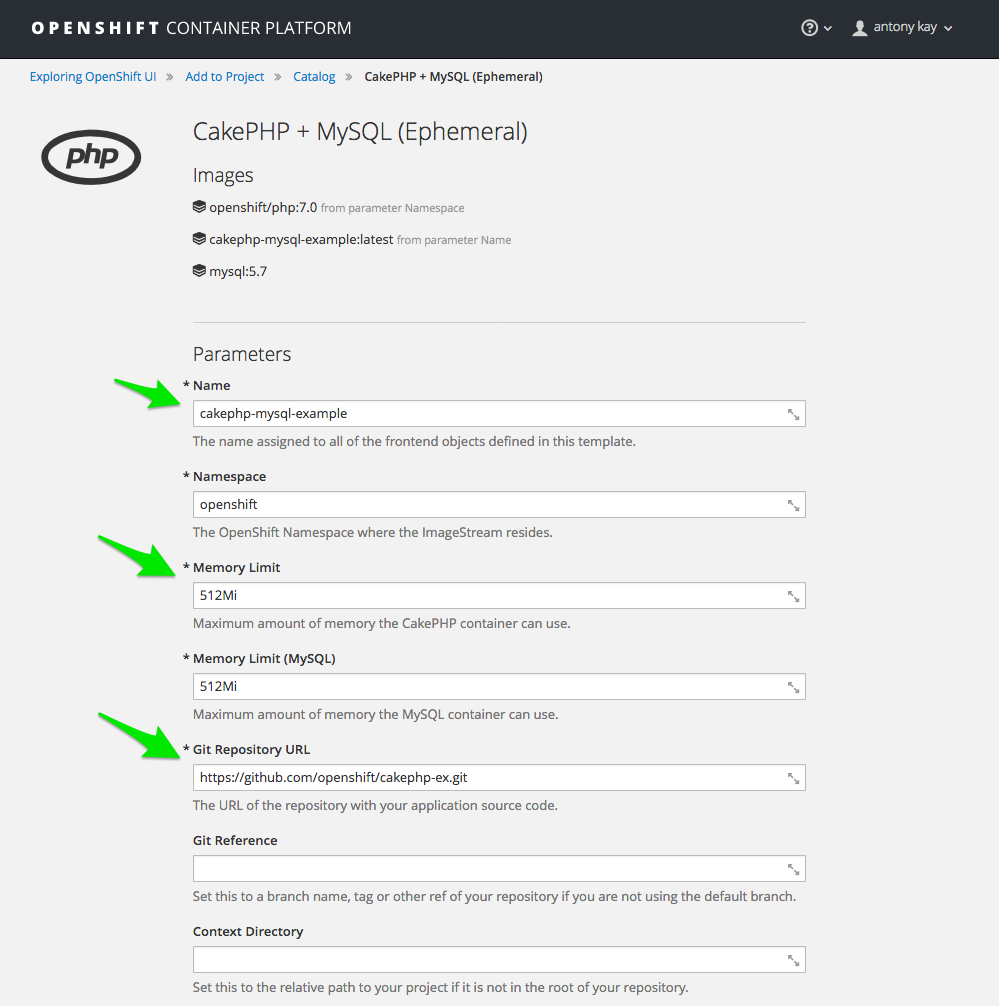
## 3. Demonstrate Deploying an Application Based on a Template

|  |  |
| --- | --- |
|  | Skip this section if you already executed the steps in previous demonstrations. |

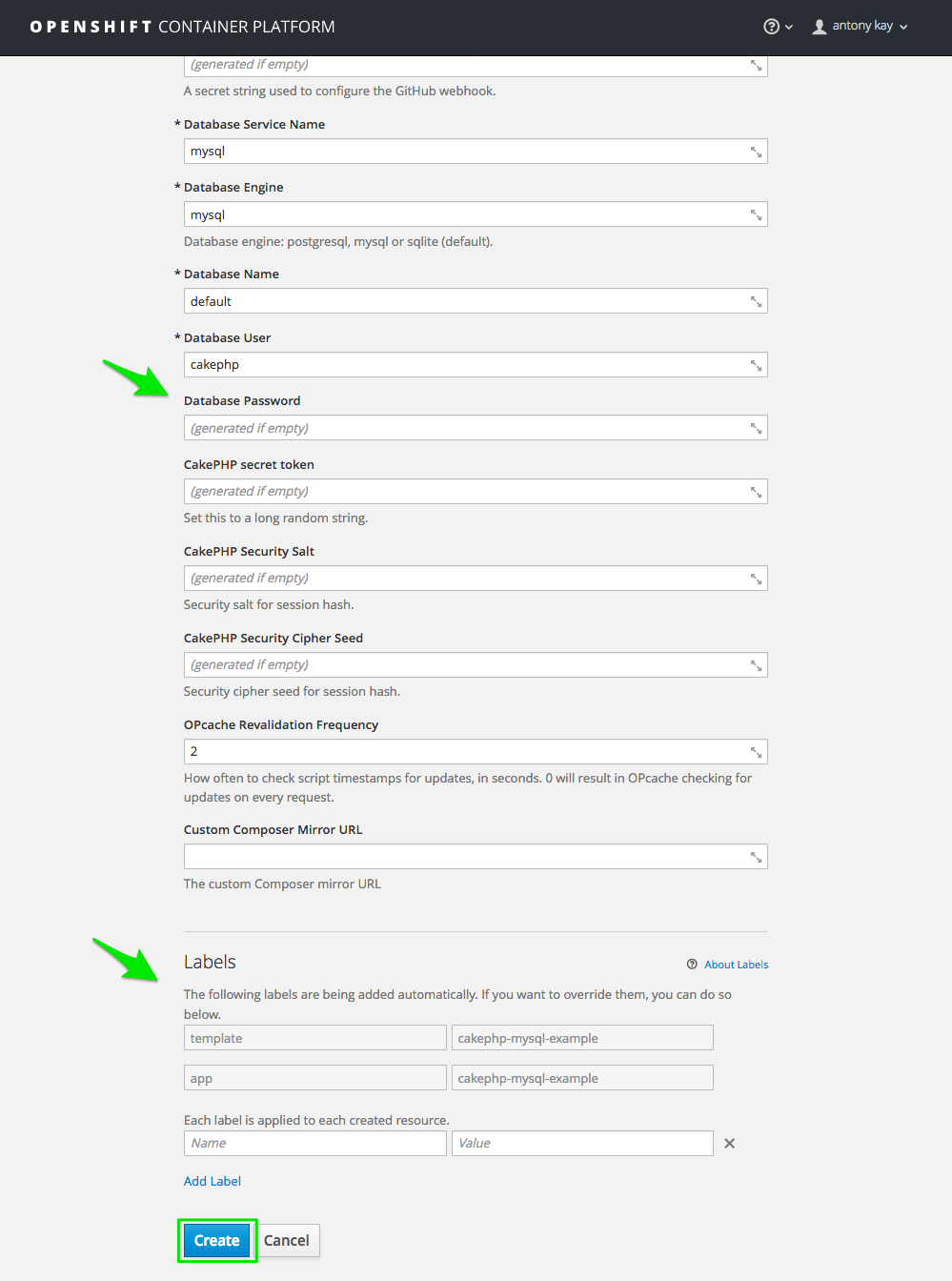
1. Action: After creating your project or after clicking Add to project, enter example in the catalog filter and select cakephp-mysql-example:



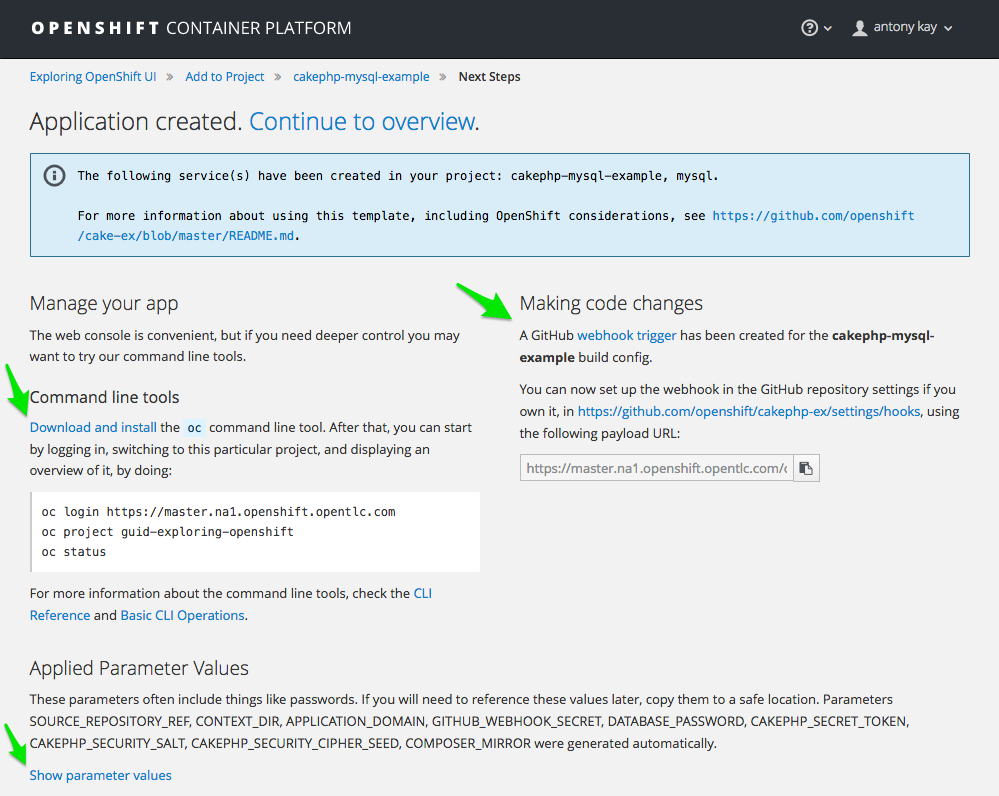
* + Explain the following aspects of the Application Creation page:
    - Point out the Name for this deployment.
    - Point out the Memory limits for your PHP application and for the MySQL database container.
    - Point out that the Git Repository URL field allows you to define the Git repository that contains the source code for your application.



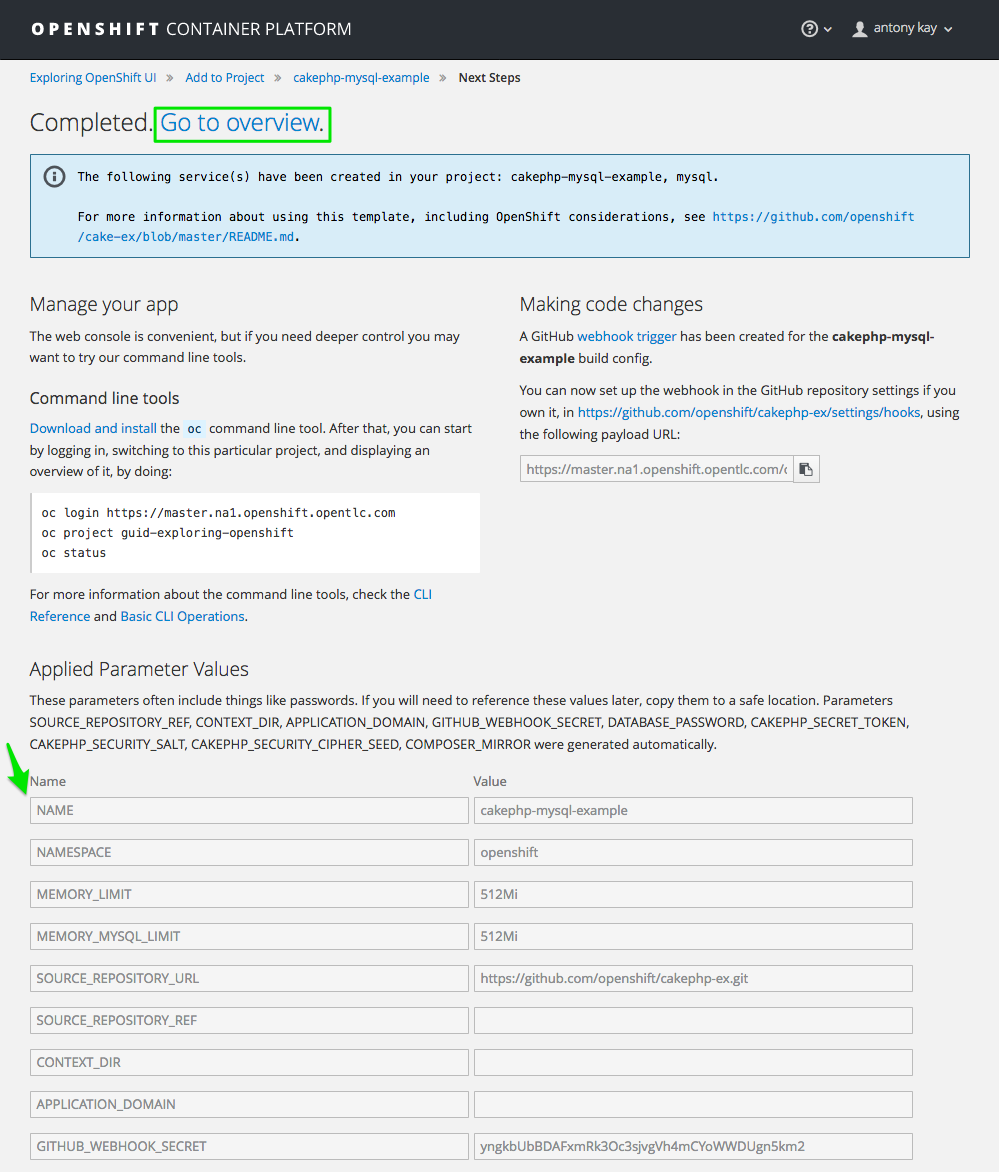
* + Explain that there are more settings that you can define as you scroll down the page:
    - Point out that you can set different variables in your deployment, such as the database user, passwords, and more, and that these settings are used to deploy the front-end application and the back-end database.
    - Point out that you can use Labels to add information to deployment objects and resources that you can then use to group, inspect, scale, or delete them.



1. Action: When you are done, click Create.
   * (Optional) Explain the following features on this screen:
     + Point out that on the left you can see an example of how to log in to OpenShift using the OpenShift client utility (oc).
     + Point out that on the right you can easily access the webhook trigger to create a new build.
     + Point out that you can view the deployment parameters values by clicking Show parameter values:



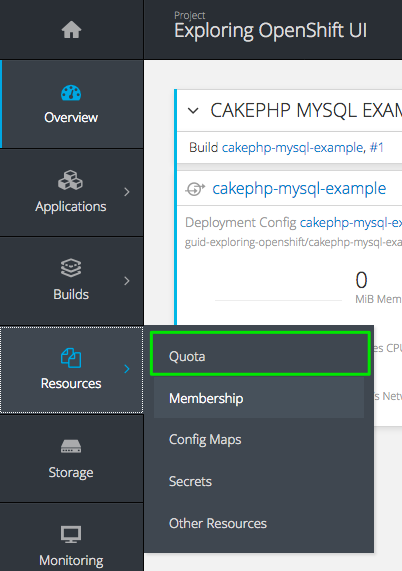
* + (Optional) Explain (if you clicked the link) that the expanded parameters now visible at the bottom provide another view of all the settings you can use for this application:



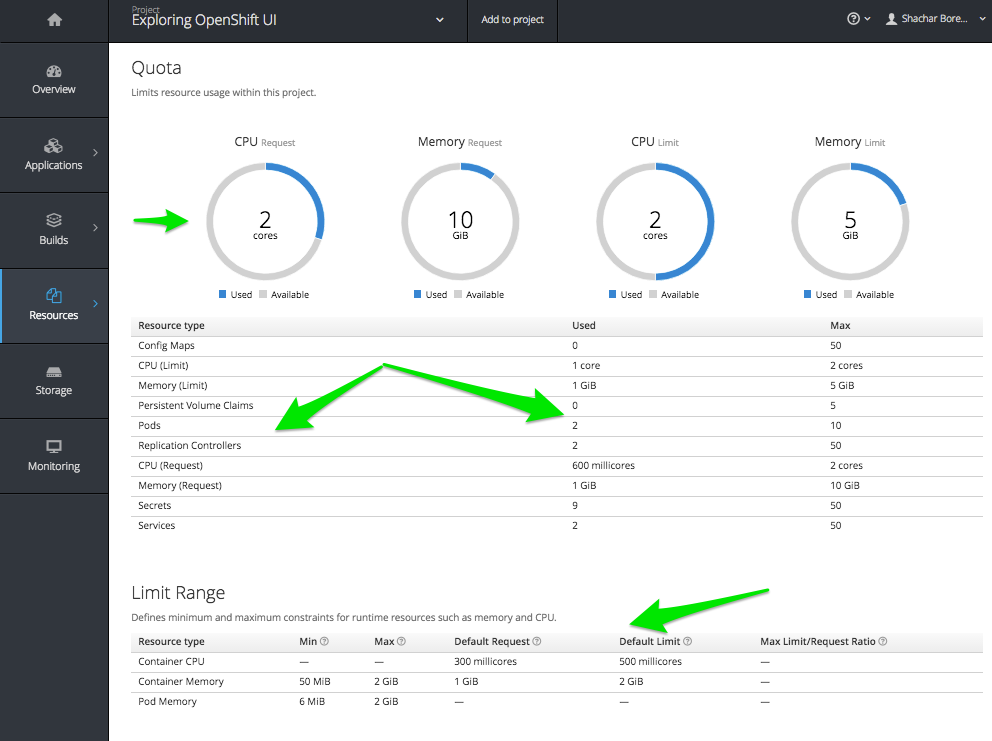
1. Action: When you are done, click Continue to overview at the top.

## 4. Demonstrate Exploring Quotas & Limits

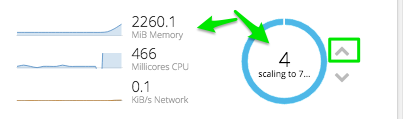
1. Action: From the menu on the left, select Resources → Quota:



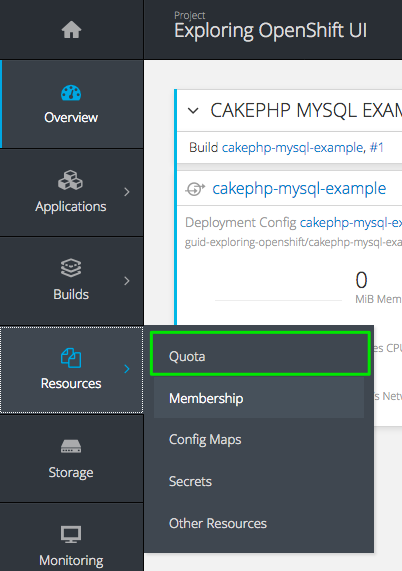
1. Explain that the project’s Quota page displays all of the quotas and limits currently set for the project:
   * Point out the graphical display of usage and availability of resources in the project based on requests and limits for CPU and memory.
   * Point out the specific quota and usage data for each resource type.
   * Point out the container and pod requests and limits.



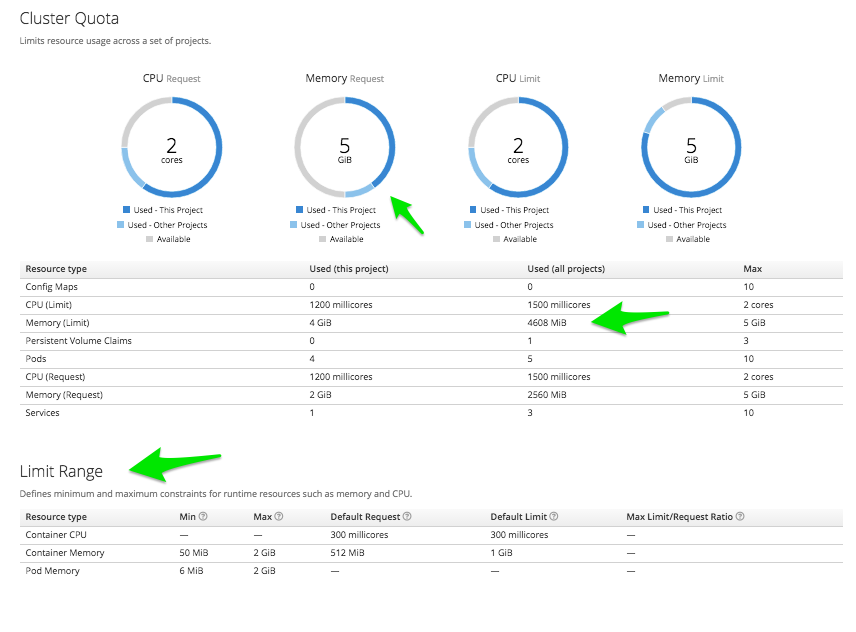
1. Action: From the menu on the left, select Overview to return to the Overview page.
   * Explain that you are now going to scale up the deployment to show how the quota limits restrict the deployment from using more resources than allowed.
2. Action: Scale your application to 7 pods by clicking the Up button (marked with a green square) six times.
   * Point out that you can see OpenShift scaling up the pods.
   * Point out that you can also see the resources used by all of the pod replicas in this deployment.



1. Action: From the menu on the left, select Resources → Quota to return to the Quota page:



* + Explain that the Quota page displays your quota, and that depending on the policy set by the cluster’s administrators you can have a quota set per project, group of projects, user, or none at all:
    - Point out that the graphics display the resources that are used by the current project or by other projects.
    - Point out that it is easy to spot where your quota is limiting your deployment from scaling up.
    - Point out that the limit ranges define the minimum and maximum constraints for container resources such as memory and CPU.



## 5. Cleanup

If you are not going do do any additional demonstrations go back to the OpenShift Homepage and delete your project.

## 6. Additional Demonstrations

You can do the following optional demonstrations:

* Show adding storage to a container.
* Show metrics and logging for a container.