Immersion Day

Creating an Elastic Load Balancer

Rev 2015-01

Table of Contents

Overview

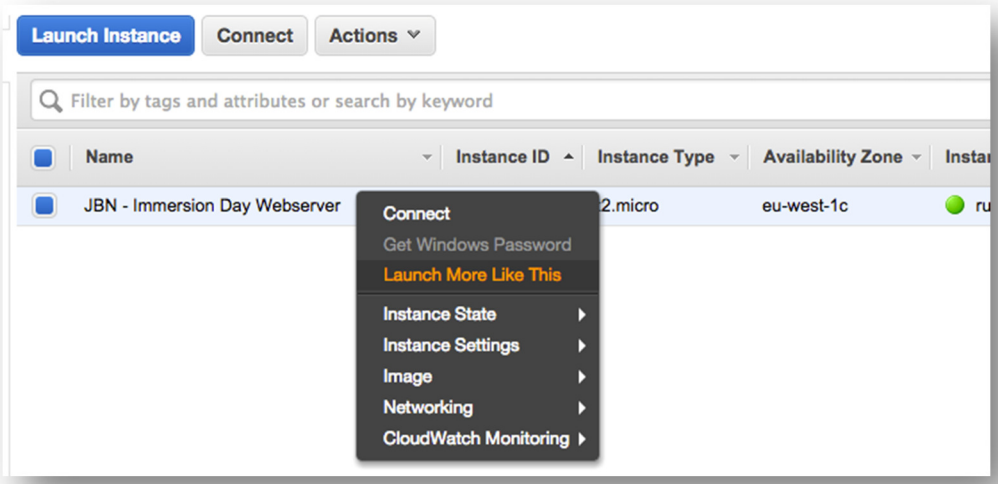
This lab will walk the user through creating an ELB to load balance traffic across several EC2 nodes in a single Availability Zone.

This lab has a prerequisite of Immersion Day – Getting Started with EC2 and assumes that you have already launched your first web server. This lab will demonstrate configuring a farm of web servers from the Immersion Day – Getting Started with EC2 lab to use ELB for its load balancing needs.

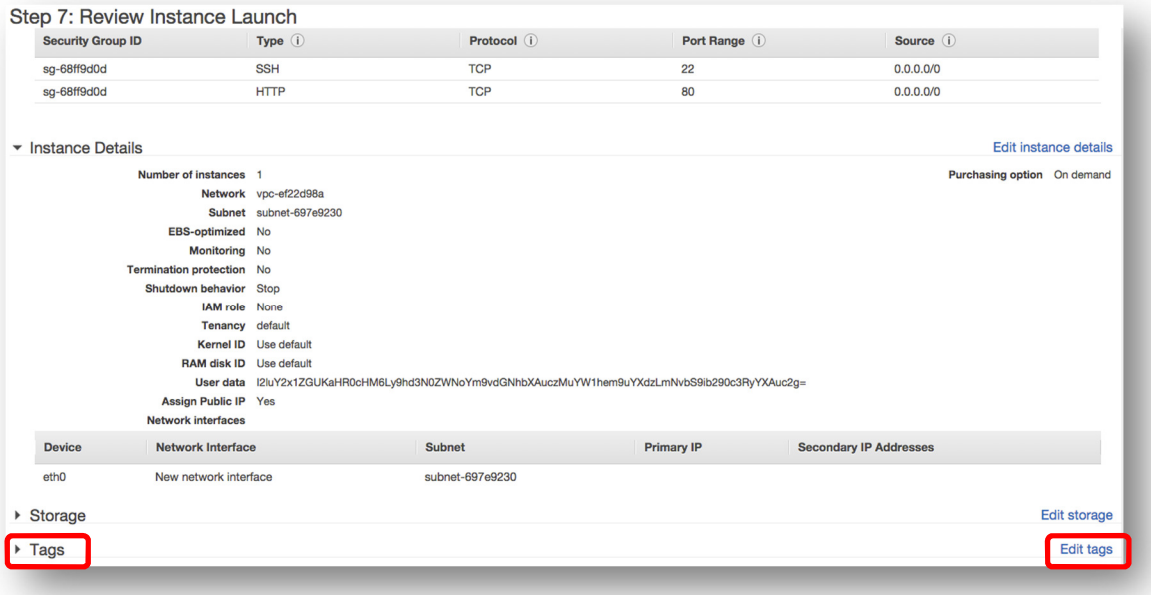
Launch a Second Web Server

Let's launch another web server, similar to our existing web server instance.

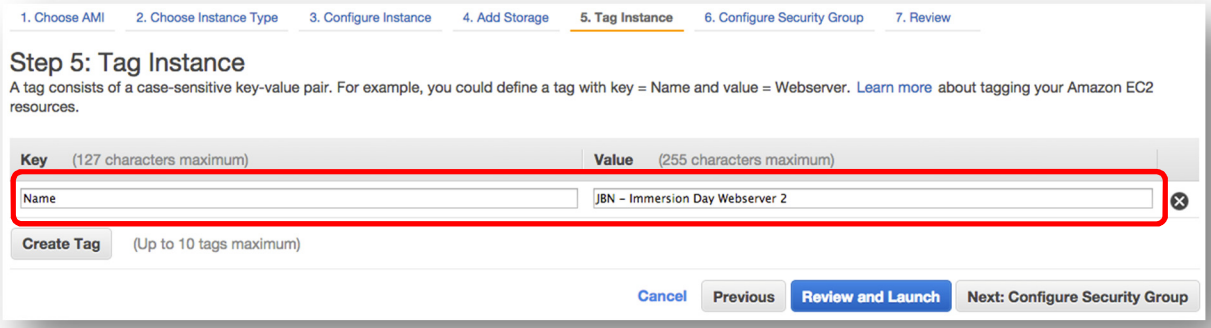
1. Right click your web server and choose **Launch More Like This**. As it implies, this feature will launch another web server similar to the existing web server.



2. On the next screen, scroll down to the **Tags** section and click **Edit Tags**.



3. Change the **Value** of the **Name** tag to something different than the first instance, like [Your Initials] – Immersion Day Webserver 2.

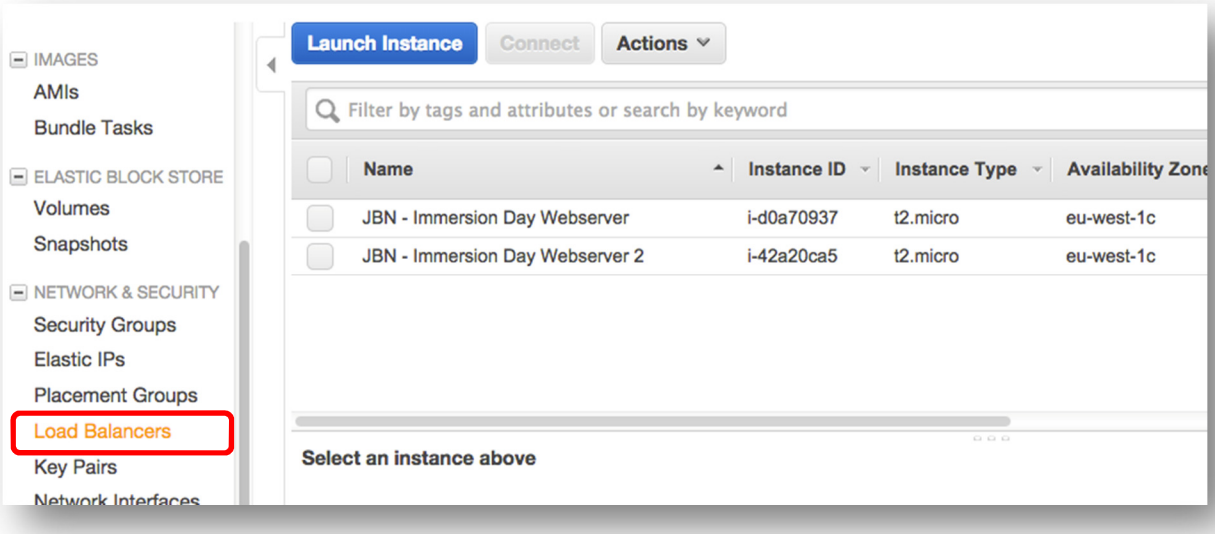


4. Click the **Review and Launch** button and then on the next screen click the blue **Launch** button near the bottom right corner.
5. On the next screen, ensure you have a keypair selected, checkmark the acknowledgement and click on the **Launch Instances** button. Like your first instance, this newly launched instance will take a few minutes to boot and configure itself.
6. Once the second web server has passed its status checks, confirm the web server is operational by browsing to its web site using its public DNS.

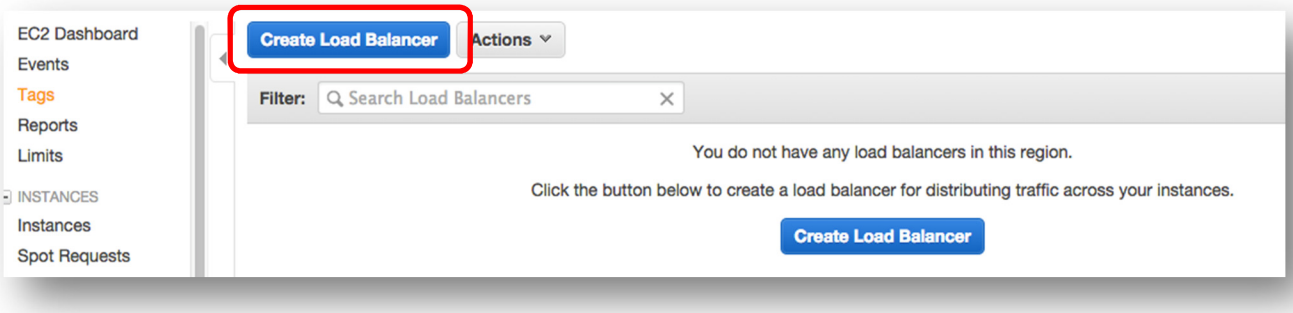
Create an ELB

You now have two web servers, but you need a load balancer in front of these servers to give your users a single location for accessing both servers and to balance user requests across your web server farm.

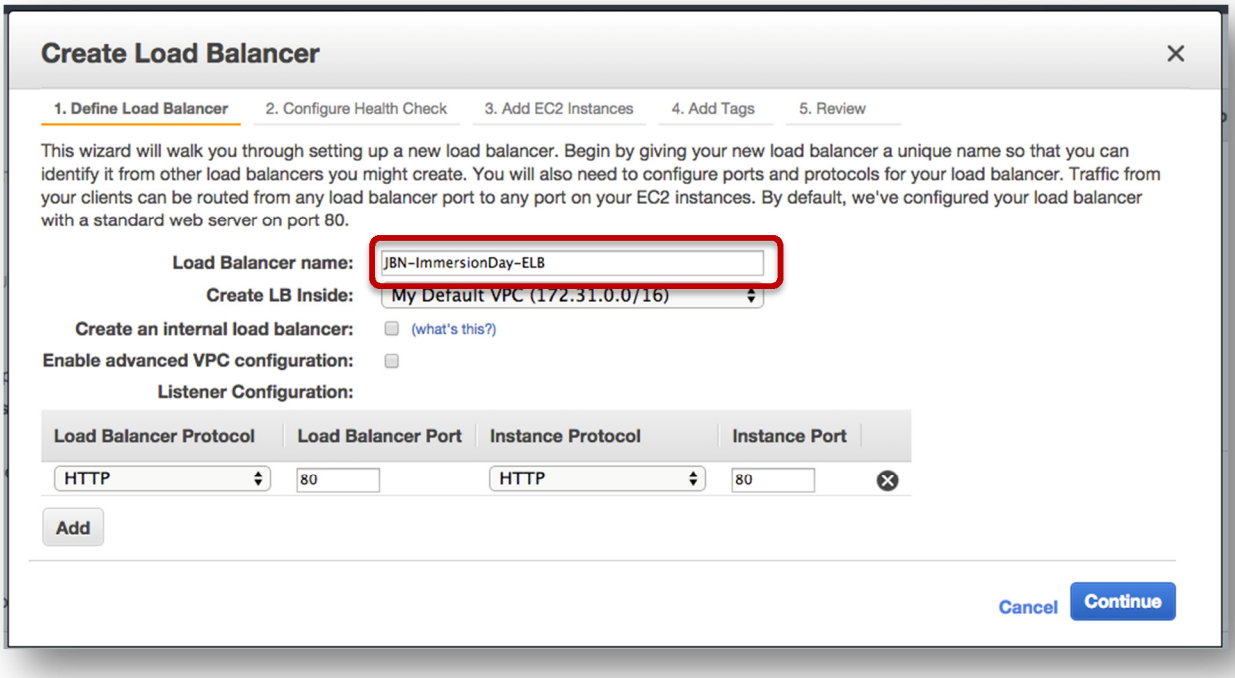
1. Click on the **Load Balancers** link in the EC2 Console.



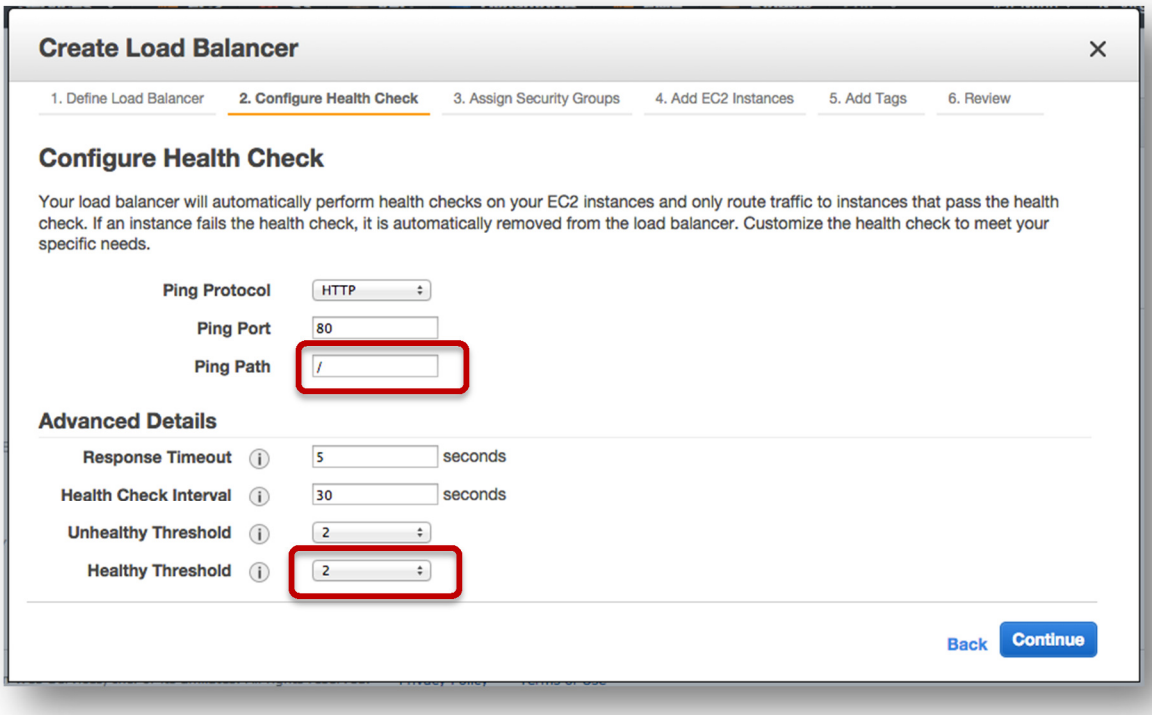
2. Click on **Create Load Balancer** button.



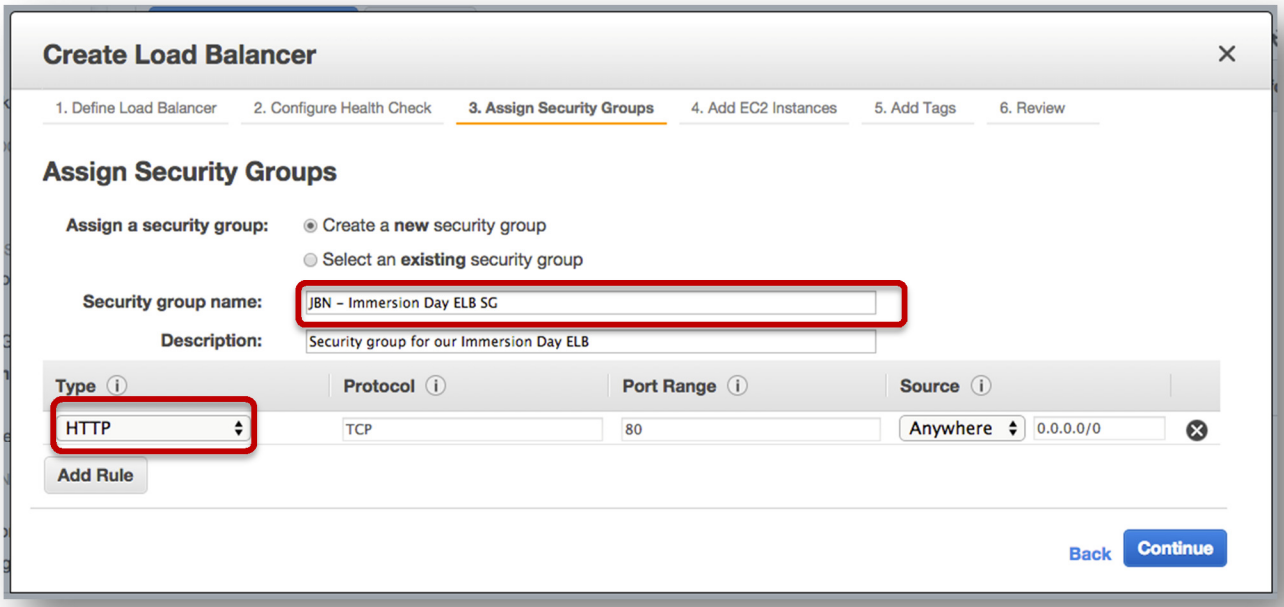
3. We will just be creating a HTTP load balancer, so give your ELB a new name like **[Your Initials]–ImmersionDay-ELB**, accept the default listener configuration, and click **Continue**.



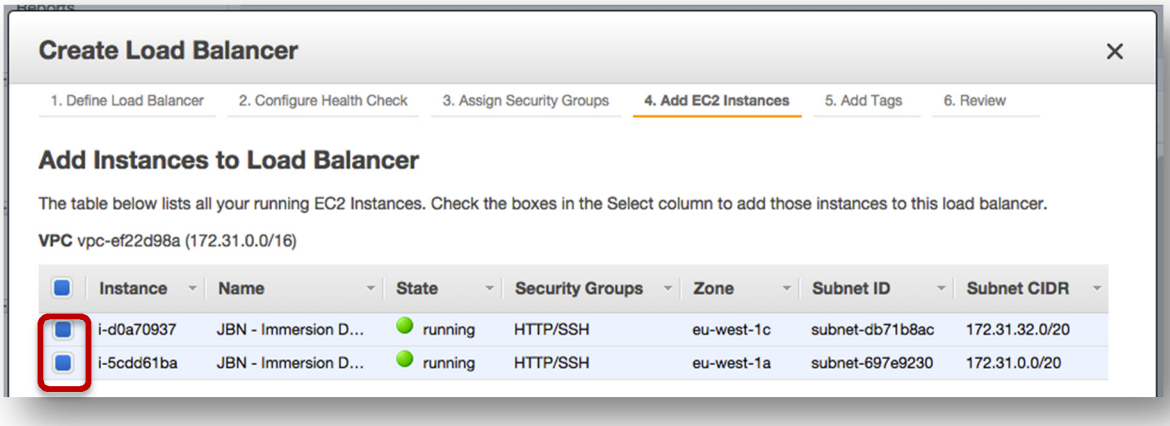
4. On the next screen change **Ping Path** to / (delete index.html), **Healthy Threshold** to 2 and accept the rest of the default options by clicking **Continue**.



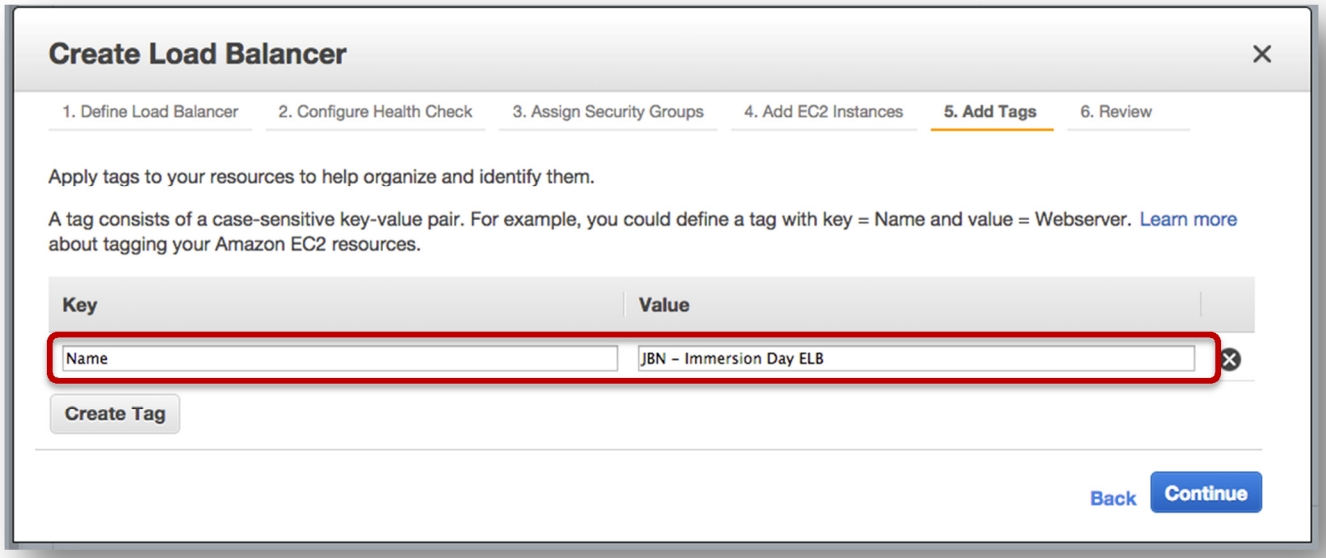
5. On the next screen we'll create a new security group for our ELB. Name your security group something like **[Your Initials] – Immersion Day ELB SG,** and allow HTTP traffic to be passed to your instances by creating a rule of type **HTTP** for port 80, then click **Continue**.



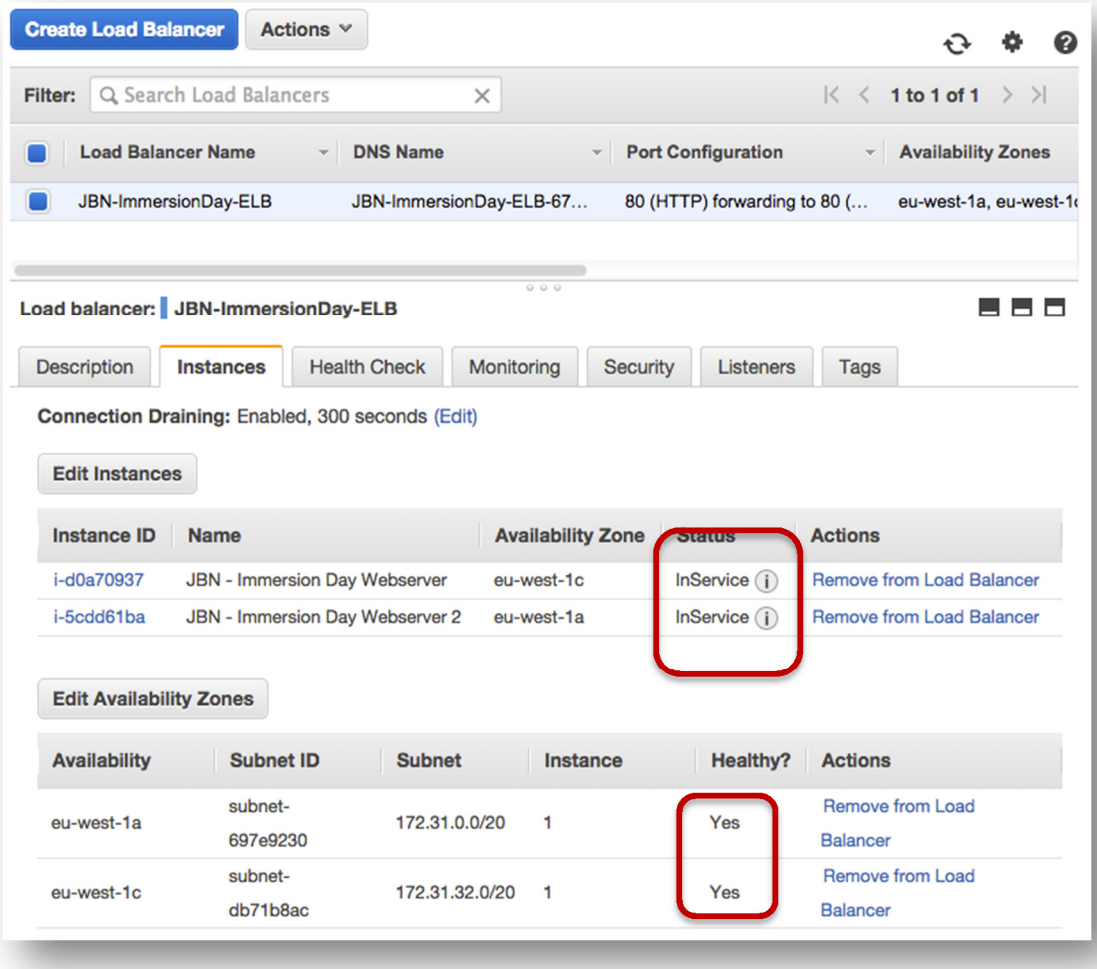
6. Select your Web Servers to add them to your ELB and click **Continue**.



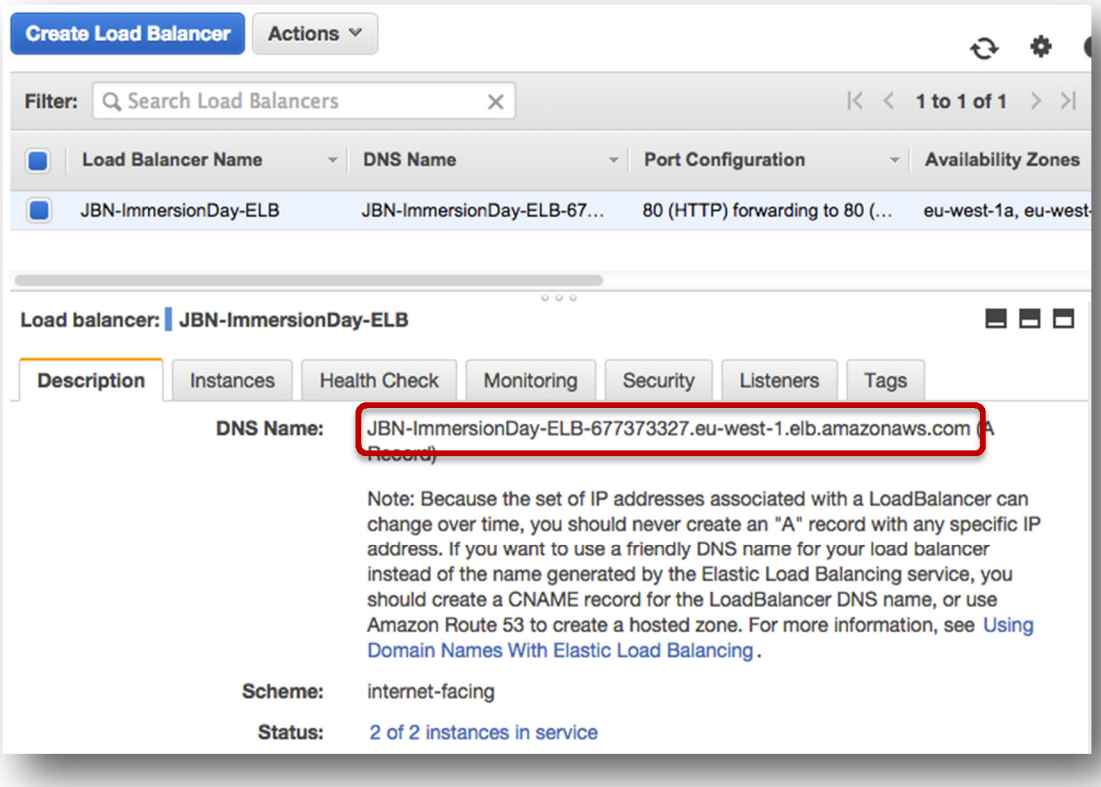
7. Tag your ELB with a **Key** of Name and a **Value** of [Your Initials] – Immersion Day ELB and click **Continue**.



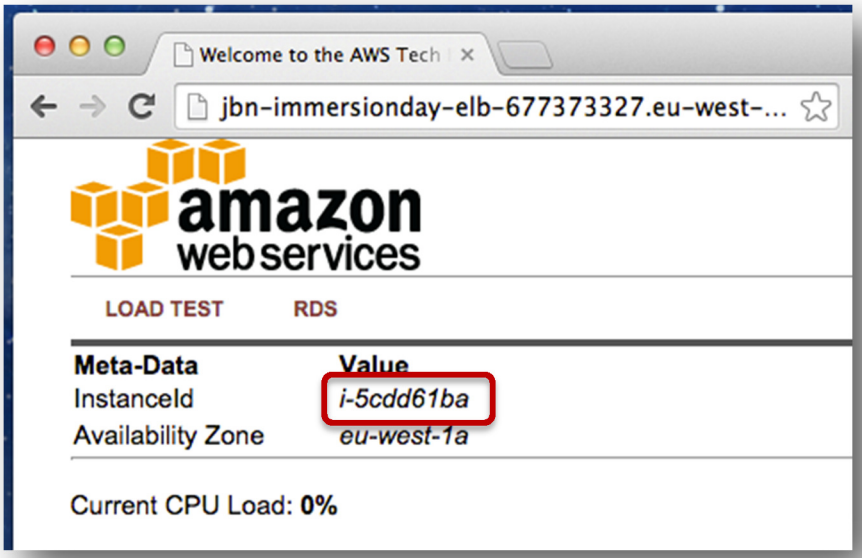
8. Review your ELB settings and click **Create** (followed by **Close**).
9. AWS is now creating your ELB. It will take a couple of minutes to establish your load balancers, attach your web servers, and pass a couple of health checks. **Click** on your load balancer, select the **Instances tab**, and wait until the instances status changes from *Out of Service* to **In Service.** Also note that the overall "**Healthy?"** column turns from **No** to **Yes**.

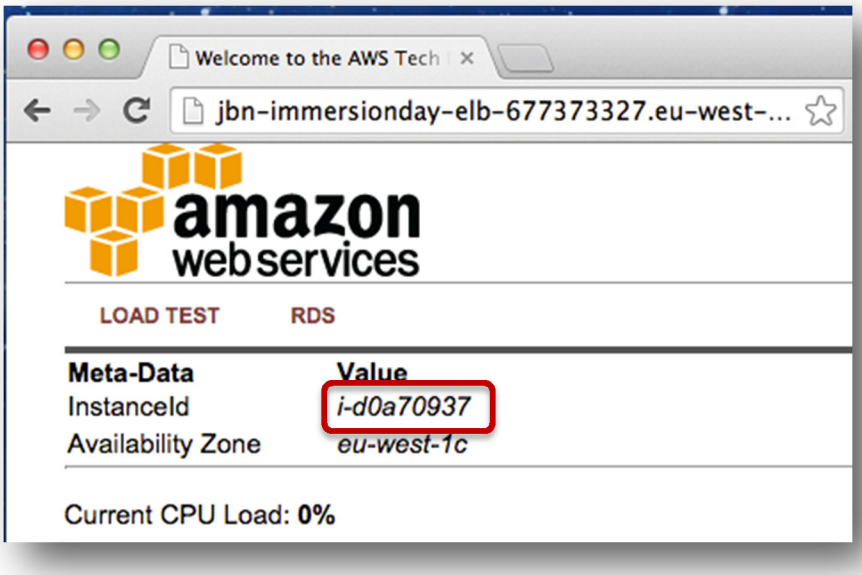


10. Once your ELB is healthy, click on the **Description tab**, select and copy the ELB's DNS name.



11. Open the ELB URL in a new browser tab. Hit the browser refresh button and you should cycle through your web servers (you may need to do a “Shift-F5” or “Shift-Refresh” as some browsers like Chrome are pretty aggressive in locally caching web pages).





12. Congratulations, you've created a load balanced website.