This lab exercise will give you hands-on experience with Istio's traffic management capabilities. For example, you can demonstrate how the traffic shifting can be used to manage deployments and migrations of service versions in a microservices architecture.

For the following four topics, please submit a word or pdf document containing your compiled screenshots for the key steps.

https://istio.io/latest/docs/tasks/traffic-management/traffic-shifting/

https://istio.io/latest/docs/tasks/traffic-management/request-routing/

https://istio.io/latest/docs/tasks/traffic-management/fault-injection/

<https://istio.io/latest/docs/tasks/traffic-management/circuit-breaking/>

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**Traffic Shifting**

Deploy the [Bookinfo](https://istio.io/latest/docs/examples/bookinfo/) sample application. :

A computer screen with white text

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

Refreshing webpage get 2 versions :

Nearly all the time 50 % 50% -- I refresh and got nearly 50 v1 and 50 v3

A screenshot of a computer

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AI-generated content may be incorrect.

Refreshing now and all the time reviews will appear with stars:

A screenshot of a computer

AI-generated content may be incorrect.

**Request Routing:**

**Route to version 1**

**h**ave configured Istio to route to the v1 version of the Bookinfo microservices, most importantly the reviews service version 1.

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AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

**Route based on user identity**

Now the stars are gone. This is because traffic is routed to reviews:v1 for all users except Jason.:

Jason can see the stars:

A screenshot of a computer error

AI-generated content may be incorrect.

The rest can’t see the starts after this :

A screenshot of a computer

AI-generated content may be incorrect.

**Injecting an HTTP delay fault:**

On the /productpage web page, log in as user jason.

You expect the Bookinfo home page to load without errors in approximately 7 seconds. However, there is a problem: the Reviews section displays an error message:

A screenshot of a computer error

AI-generated content may be incorrect.

The response time when you refresh is about 6 seconds :

A screenshot of a computer

AI-generated content may be incorrect.

**Circuit Breaking:**

**Configuring the circuit breaker:**

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AI-generated content may be incorrect.

**request succeeded:**

A computer screen shot of a black screen

AI-generated content may be incorrect.

**Call the service with two concurrent connections (-c 2) and send 20 requests (-n 20):**

**A screenshot of a computer program

AI-generated content may be incorrect.**

**Bring the number of concurrent connections up to 3:**

**A screenshot of a computer

AI-generated content may be incorrect.**

**Query the istio-proxy stats to see more:**

**A screen shot of a computer code

AI-generated content may be incorrect.**