**June 2019 Edition**

**Notices**

This information was developed for products and services offered in the US.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing IBM Corporation
North Castle Drive, MD-NC119 Armonk, NY 10504-1785
United States of America

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you provide in any way it believes appropriate without incurring any obligation to you.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to actual people or business enterprises is entirely coincidental.

**Trademarks**

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at “Copyright and trademark information” at www.ibm.com/legal/copytrade.shtml.

**Trademarks**

The reader should recognize that the following terms, which appear in the content of this training document, are official trademarks of IBM or other companies:

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide.

The following are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide:

IBM Cloud™

z/OS®

Java™ and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

VMware is a registered trademark or trademark of VMware, Inc. or its subsidiaries in the United States and/or other jurisdictions.

Other product and service names might be trademarks of IBM or other companies.

# Getting started with IBM Event Streams

- Install and configure Event Streams
- Exploring the Event Streams console
- Work with a sample application

# Installing IBM Event Streams

# Installing Event Streams on IBM Cloud Private

Ensure you have set up your environment according to the prerequisites

The Event Streams installation process creates and runs jobs in the target namespace, and in the kube-system namespace

Plan for installation: create required persistent volumes, and ConfigMap for Kafka static configuration

You will need:

- Master host and port of your IBM Cloud Private cluster
- SSH password

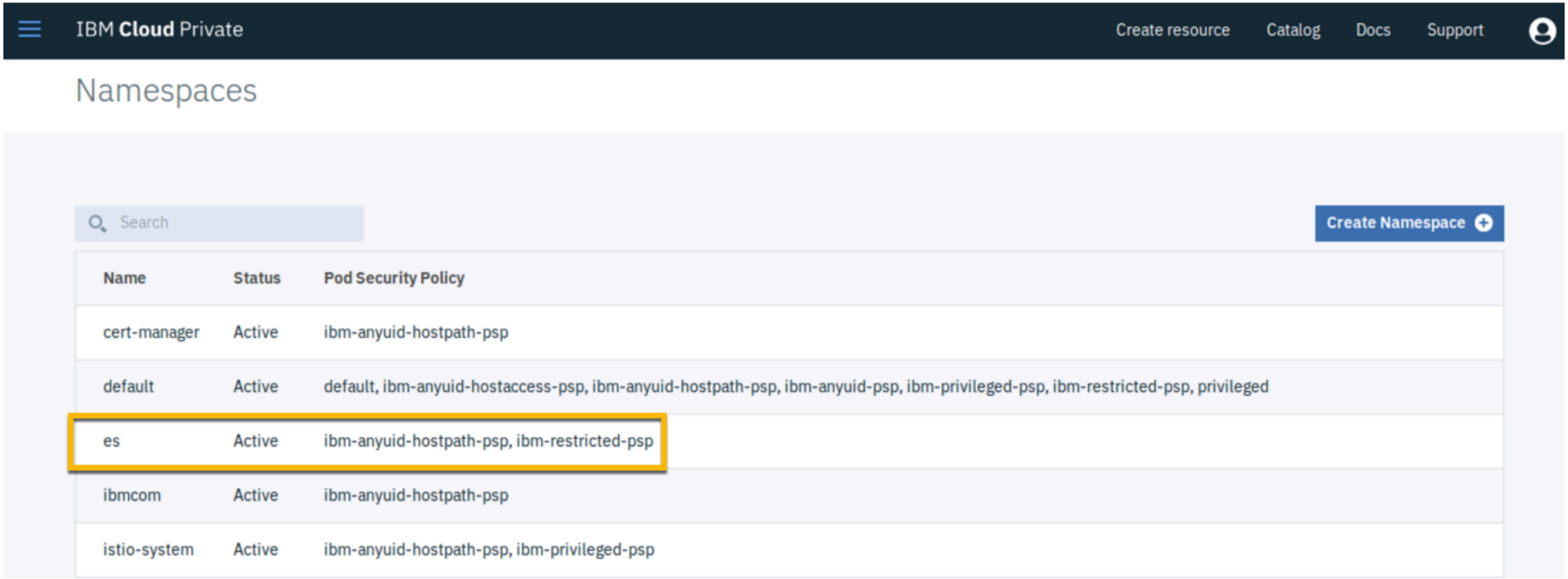
Make sure that your proxy address uses lowercase characters (otherwise, you must make the appropriate changes to your configuration)

Make sure that the IBM Cloud Private monitoring service is installed.

# Installation overview

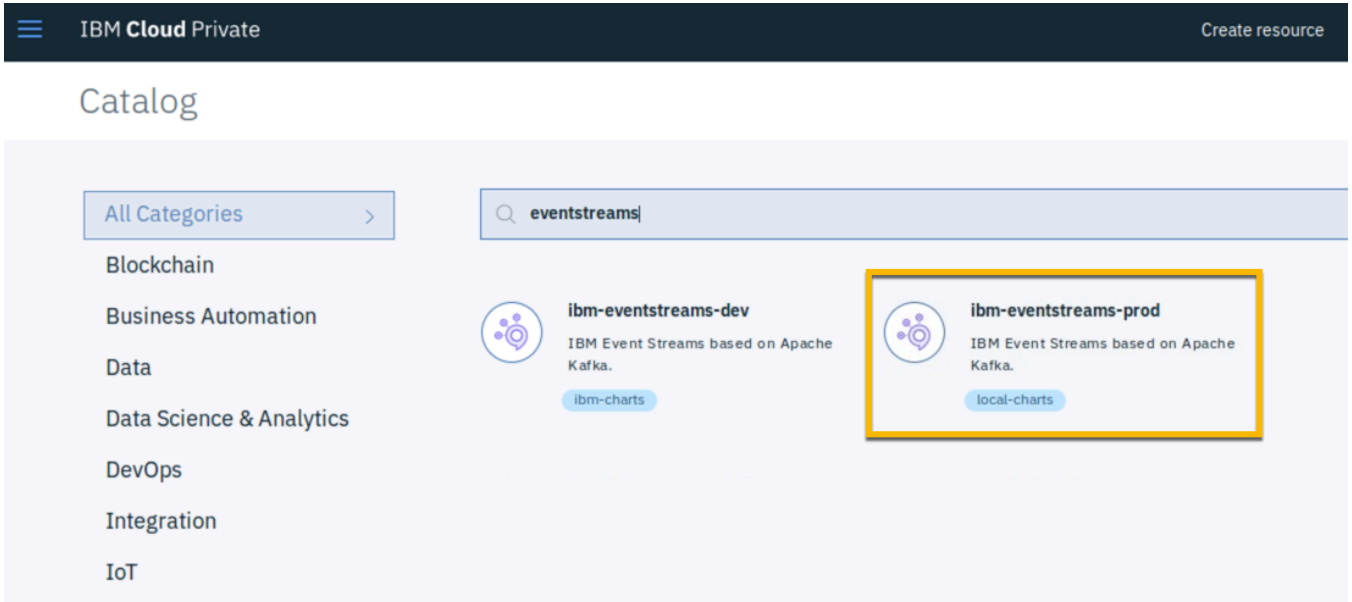
1. Create a target namespace for Event Streams
2. Download the IBM Event Streams installation image file, and make it available in your catalog
3. Create an image pull secret for the Event Streams namespace
4. Create an image policy for the internal Docker repository
5. Install the Event Streams chart
6. Verify installation

# Creating a namespace



# Using the IBM Cloud Private Catalog

1. Download the Event Streams archive
2. Log in to IBM Cloud Private (`cloudctl login`), and Docker (`docker login`)
3. Load the Event Streams Helm chart in to the IBM Cloud Private Catalog (`cloudctl catalog`)



# Image pull secret and image policy

Creating an image pull secret (kubectl create secret)

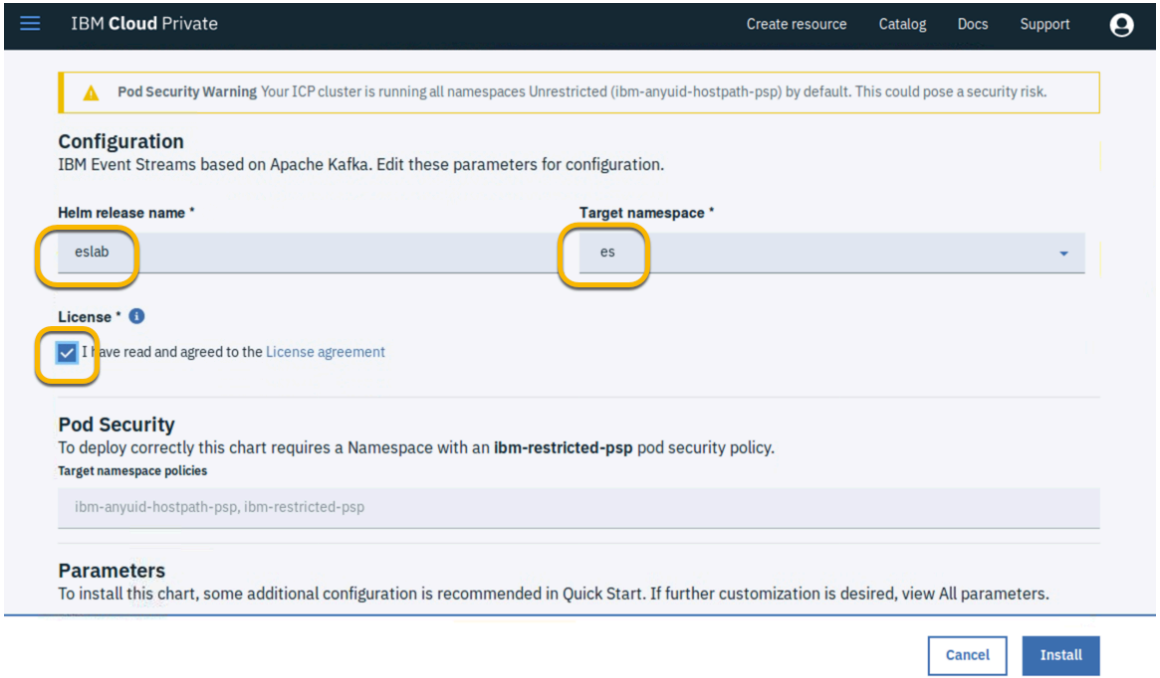
```
student@master:~/Downloads$ sudo kubectl create secret docker-registry regcred --docker-server=mycluster.icp:8500 --docker-username=admin --docker-password=admin --docker-email=mirv@us.ibm.com -n es
secret/regcred created
```

Creating an image policy

```
apiVersion: securityenforcement.admission.cloud.ibm.com/v1beta1
kind: ImagePolicy
metadata:
  name: image-policy
  namespace: es
spec:
  repositories:
  - name: docker.io/*
    policy: null
  - name: mycluster.icp:8500/*
    policy: null
```

# Installing the Helm chart

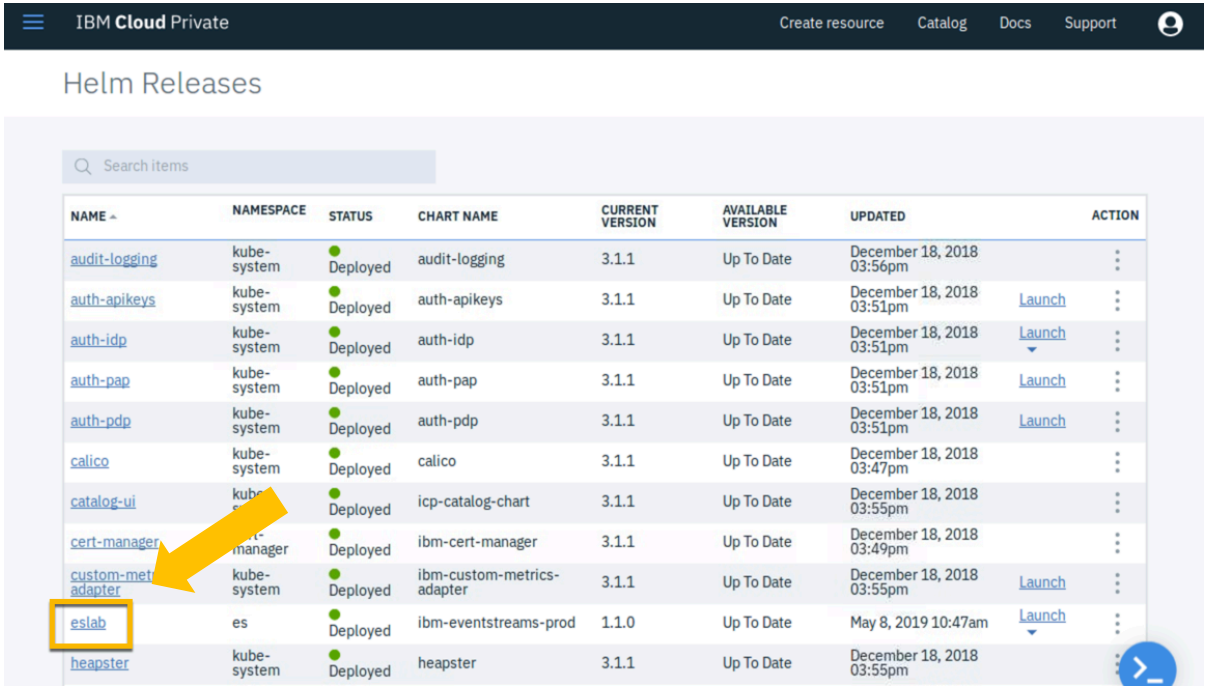
1. Sync repositories
2. Select the chart from the Catalog and click Configure
3. Enter a name and target namespace, and any other relevant information (for example, the image pull secret)
4. Click Install



# Verifying the installation

In the IBM Cloud Private console, select **Workload > Helm Releases**

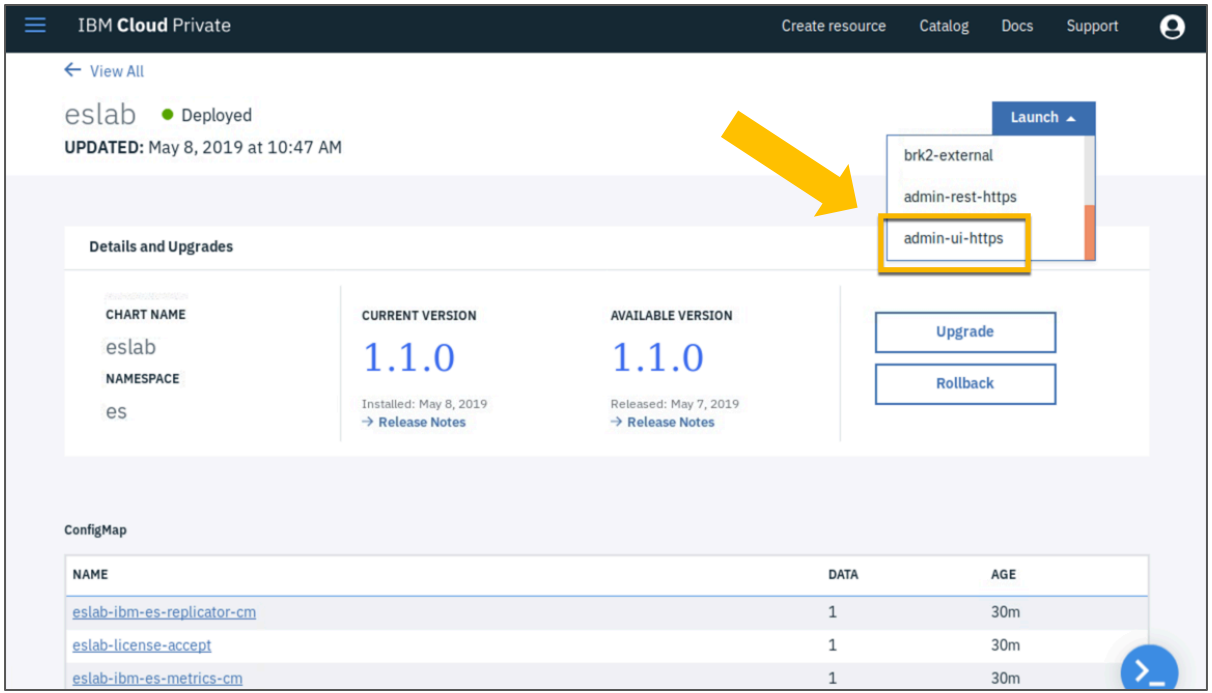
Click the release name to see more details



# Exploring the Event Streams console

# Accessing the Event Streams console

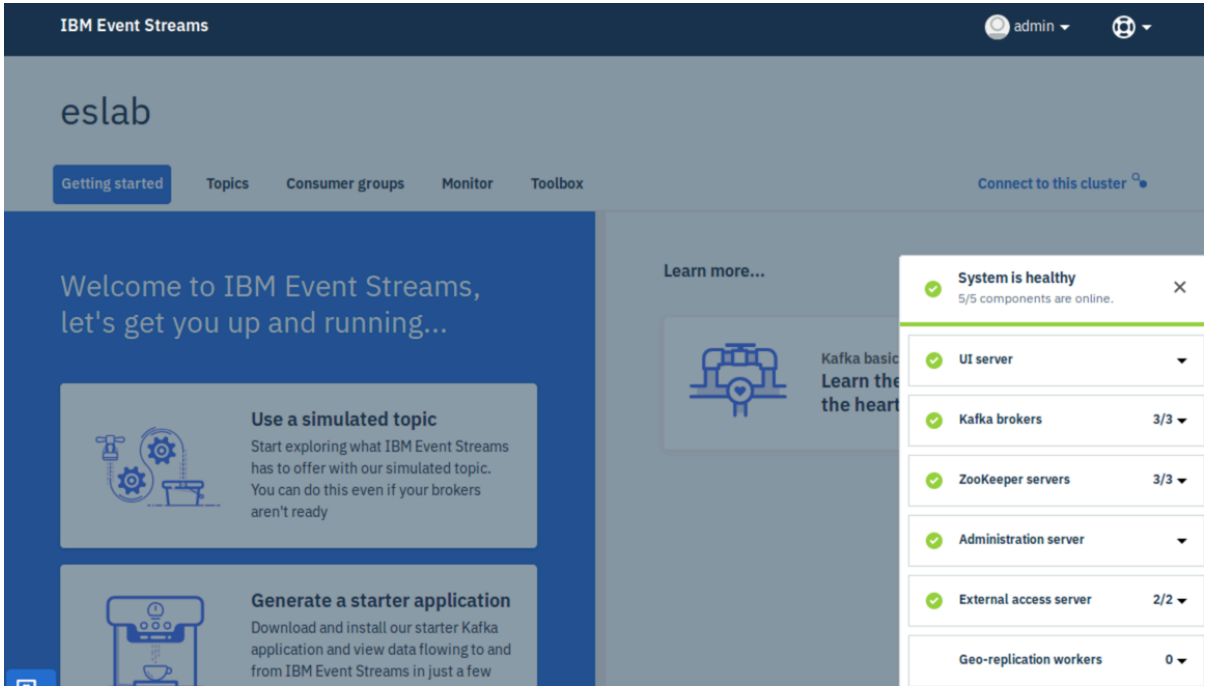
To access the Event Streams admin console,
click **Launch** in the upper right corner fo the release page, and then select **admin-ui-https**.



# Welcome page

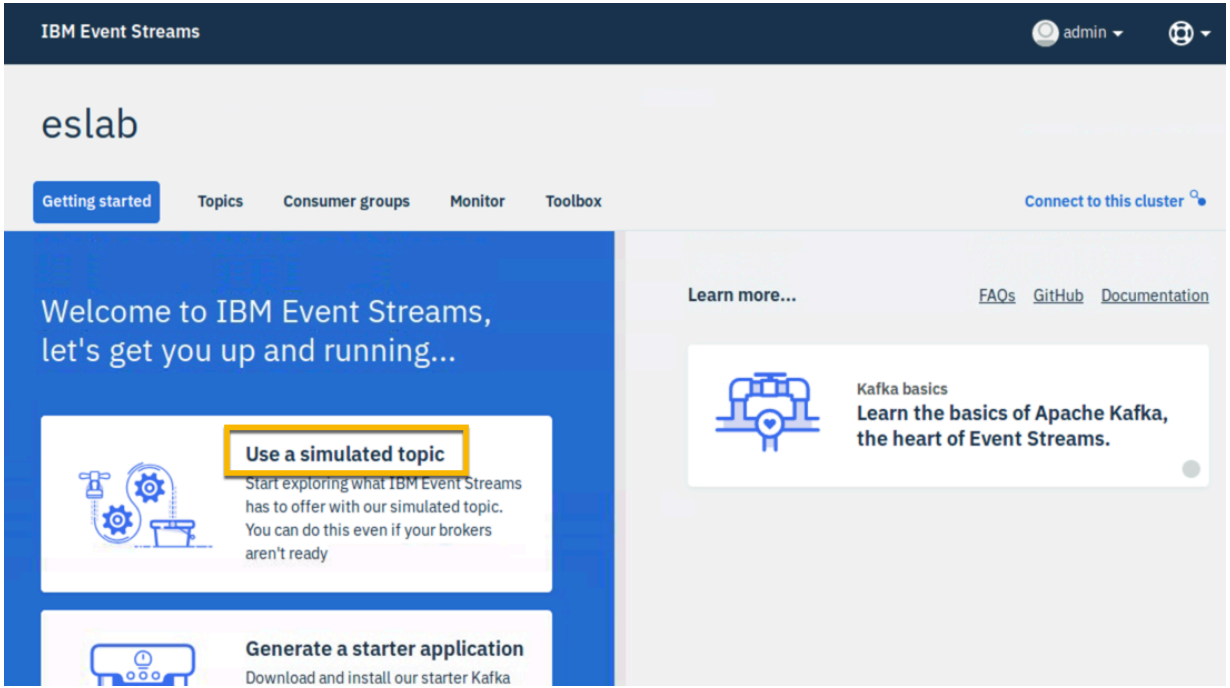
Event Streams status is displayed in the lower right corner

Click to expand the status bar



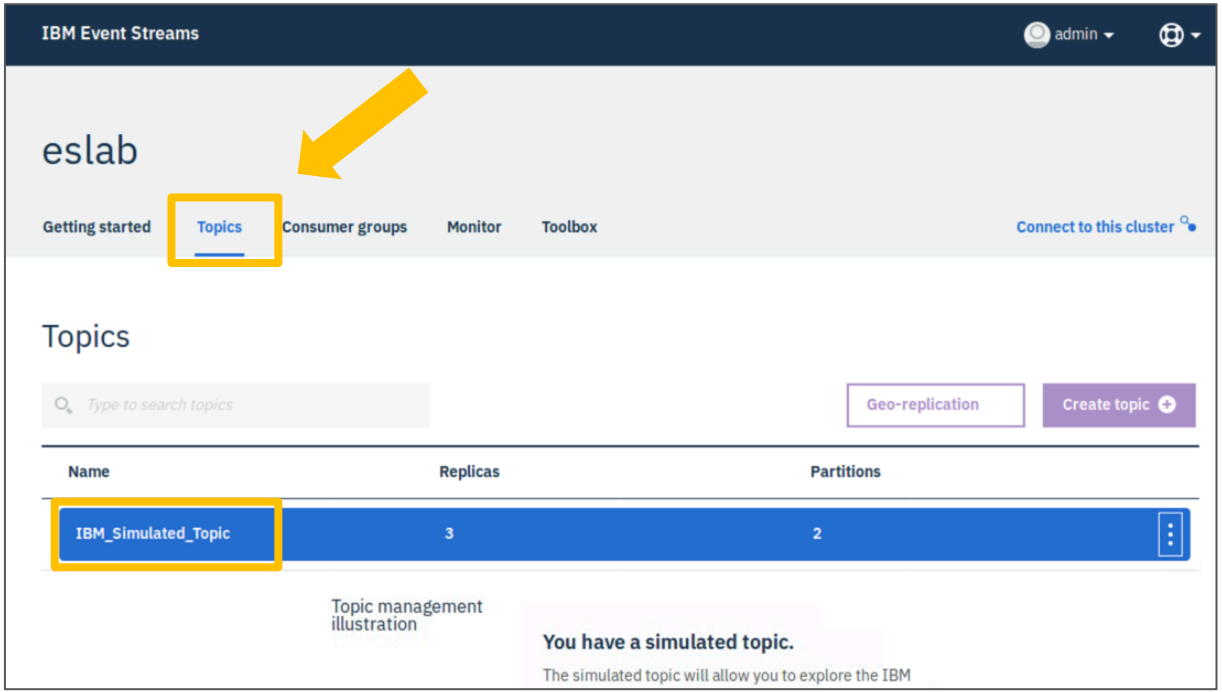
# Create a simulated topic

In the Event Streams console, click **Use a simulated topic**



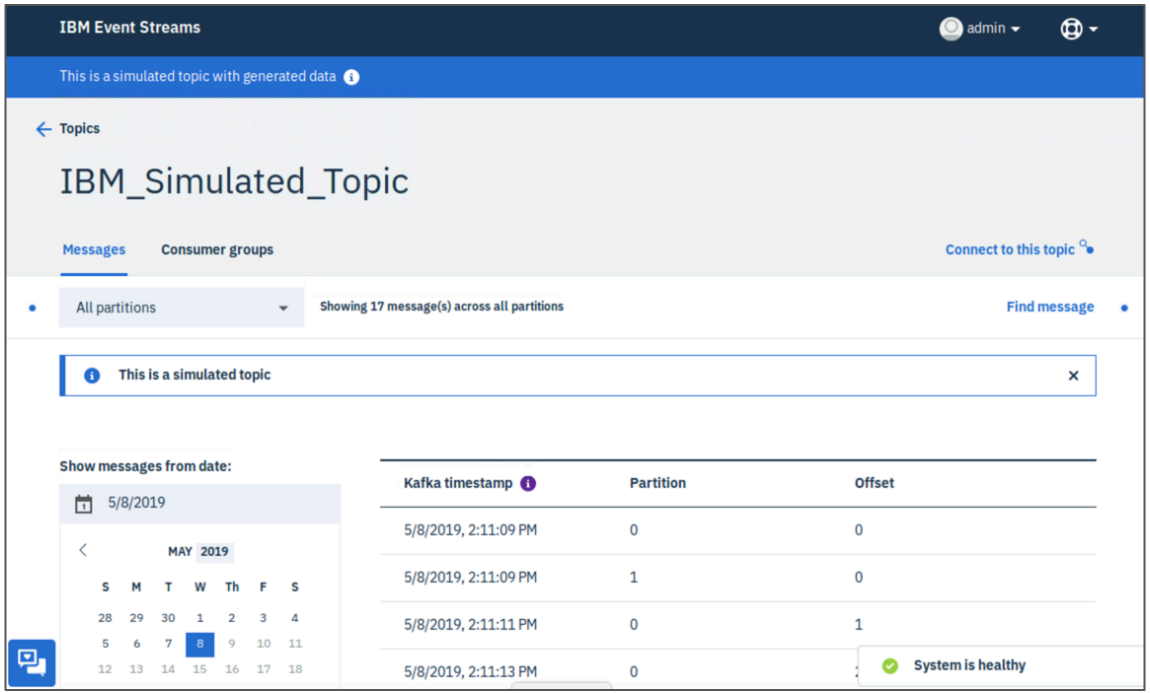
# Viewing topics

Select the Topics tab



# Topic details

On the Topics page, click a topic to view more details about it

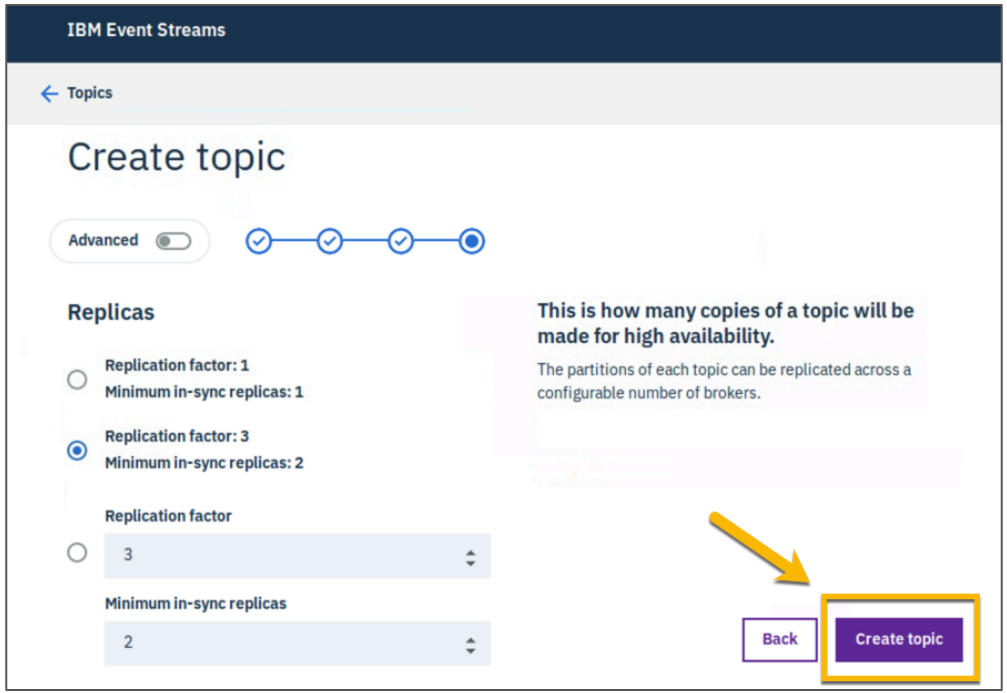


# Creating a topic

On the Topics page, click **Create Topic**

Click **Advanced** to expand and review the configuration parameters that are available

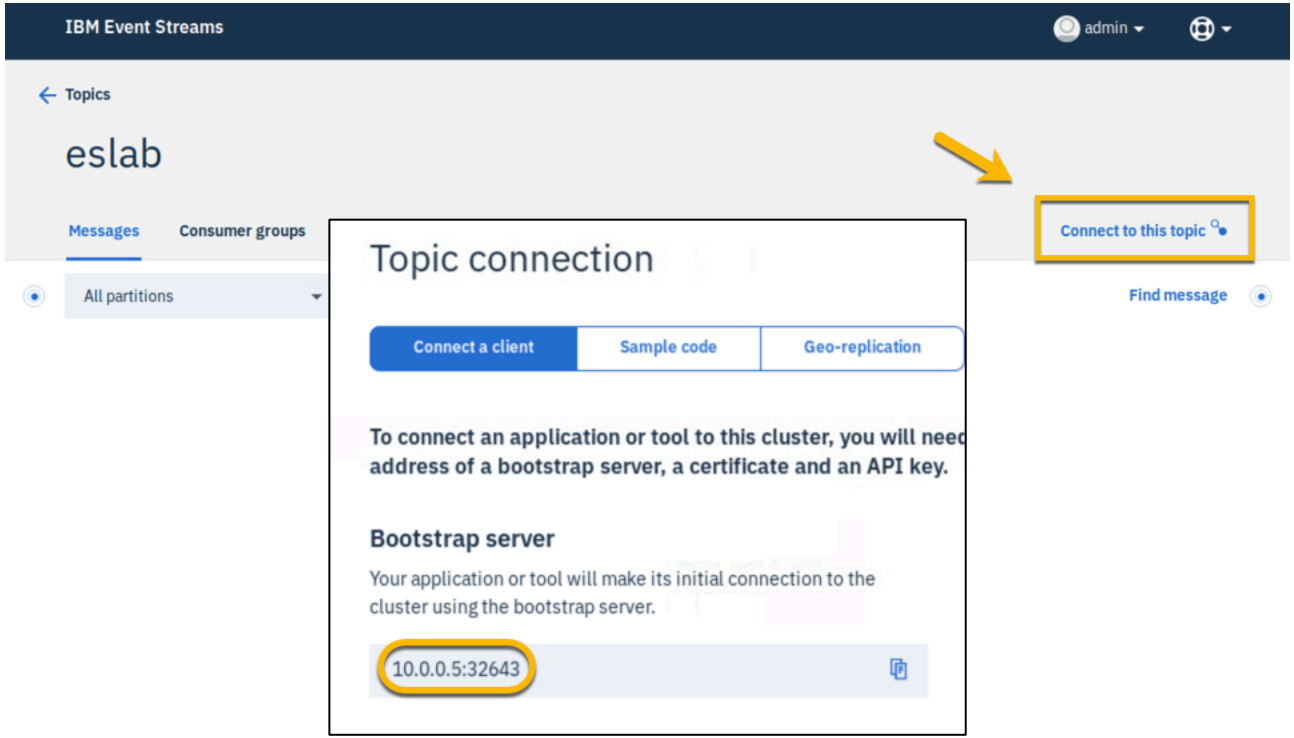
Click **Next** to proceed through the remaining options, and then click **Create Topic**



# Connecting to a topic

On the topic page, click Connect to this topic

The address and port of the bootstrap server is displayed

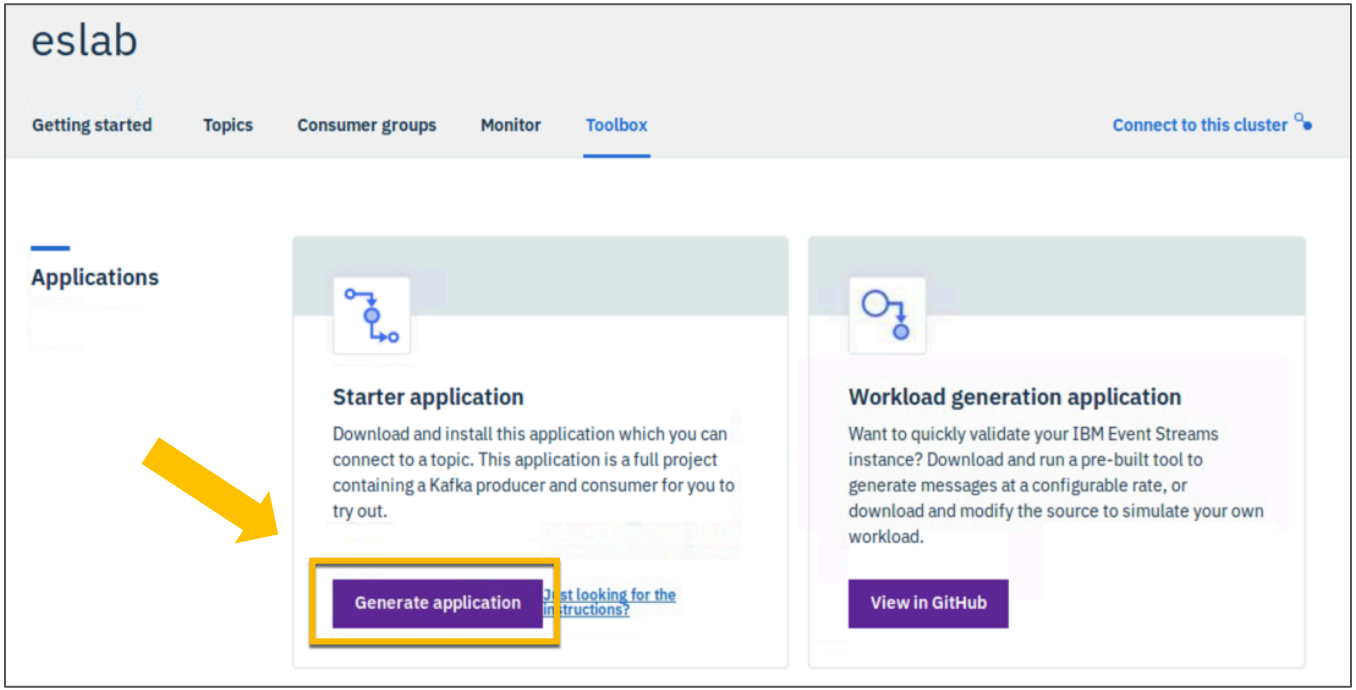


# Working with the sample applications

# Using the starter application

Click the **Toolbox** tab

Click **Generate application**

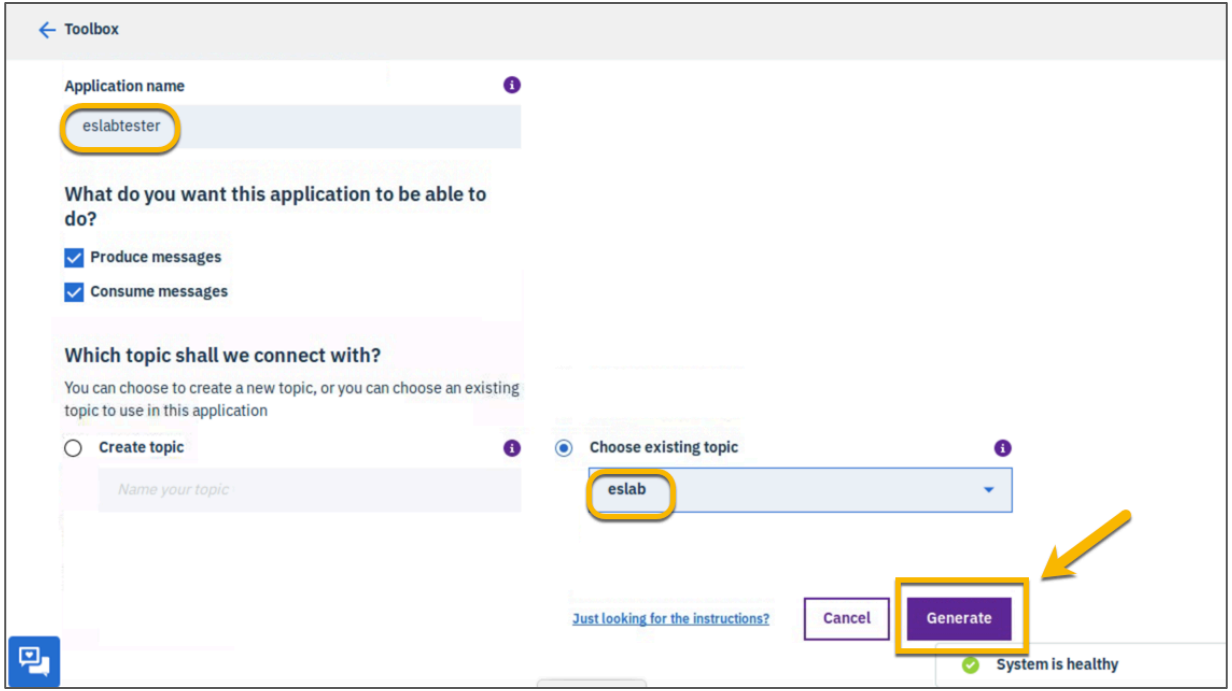


# Configuring the starter application

Enter an application name, and select a topic

Select the options to produce or consume message

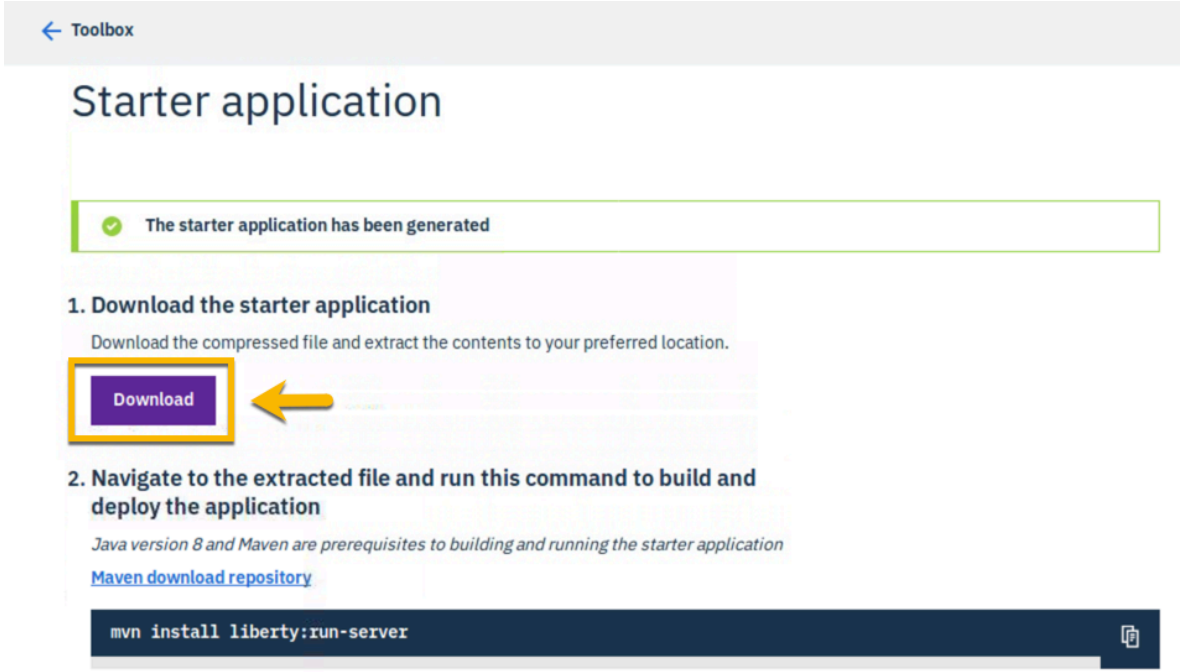
Click **Generate**



# Downloading the application

After the starter application is generated, click **Download** and save the archive file

Extract and run the application (`mvn install`)

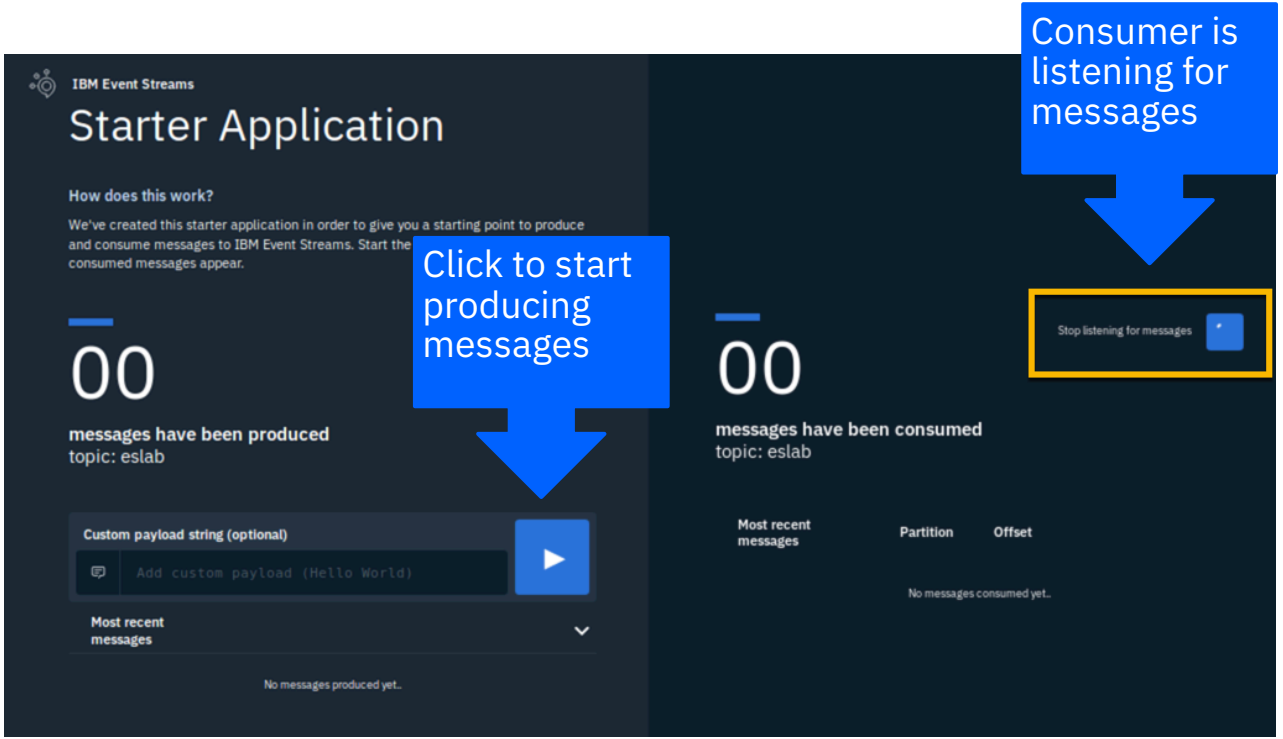


# Running the application

In a browser tab, enter the following URL:

http://localhost:9080/<application_name>

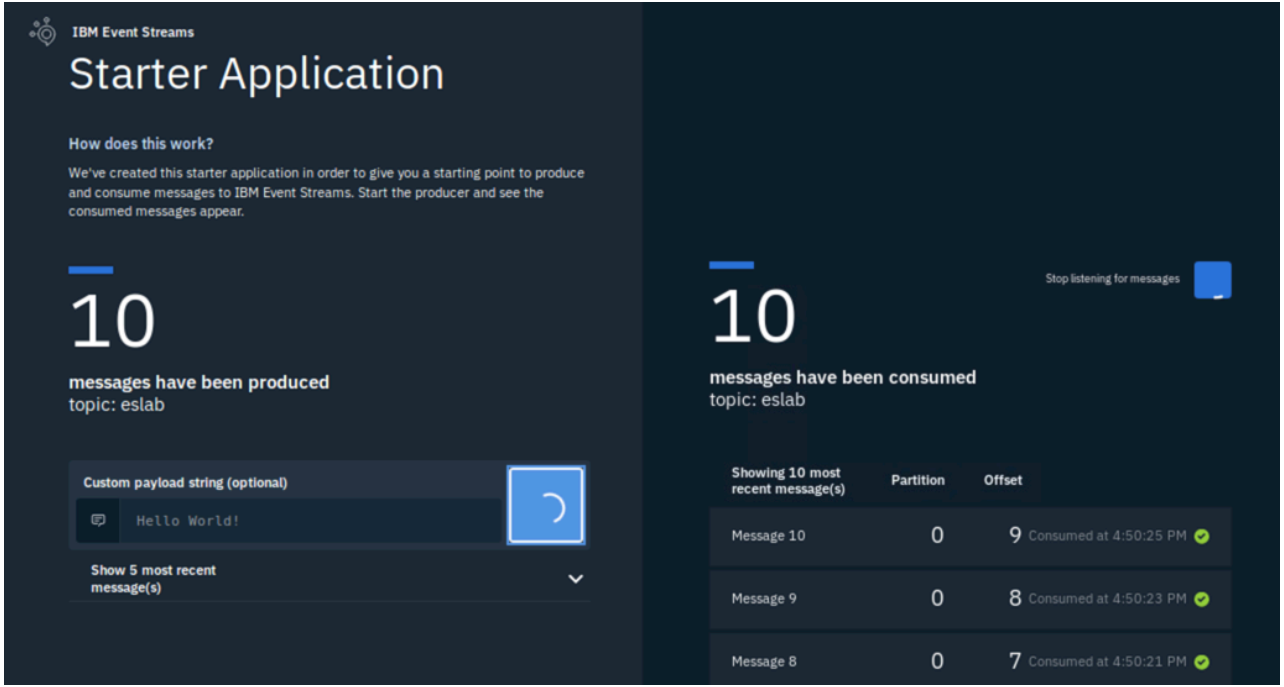
Click the arrow to start producing messages



# Running the application (cont.)

The producer begins producing messages, which are sent to the Topic

On the consumer side, the number of messages increments, while the message list becomes populated

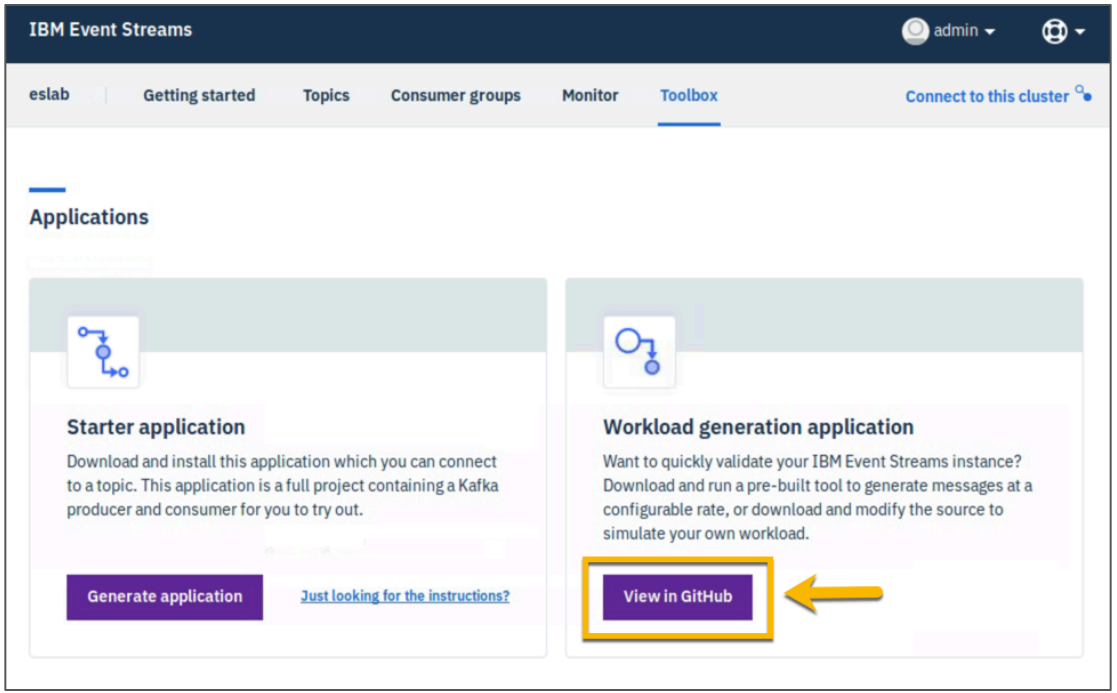


# Using the workload generator

There is another sample application that you can use to generate workloads of a specific size

You can use one of the predefined load sizes, or you can specify your own settings to test throughput

You download the application from GitHub



# Running an application with load

When you run the workload generator application, you can see some metrics for the load on the Monitor tab