



Example

In this lesson, we'll look at a practical example of an app to demonstrate what we've learned in this chapter.

We'll cover the following ^

- Introduction
- Network ports

Introduction

This example is not only provided in the Heroku cloud but also as a coding environment on Educative below.

To start the environment, press `run`. This takes quite a while because all the Docker containers are built, and also all the dependencies are downloaded from the Internet. The website will be available on a link generated below the environment such as: <https://x6jr4kg.educative.run> (<https://x6jr4kg.educative.run>).

A detailed description of how the example can be started locally is available at <https://github.com/ewolff/crimson-assurance-demo/blob/master/HOW-TO-RUN.md> (<https://github.com/ewolff/crimson-assurance-demo/blob/master/HOW-TO-RUN.md>).



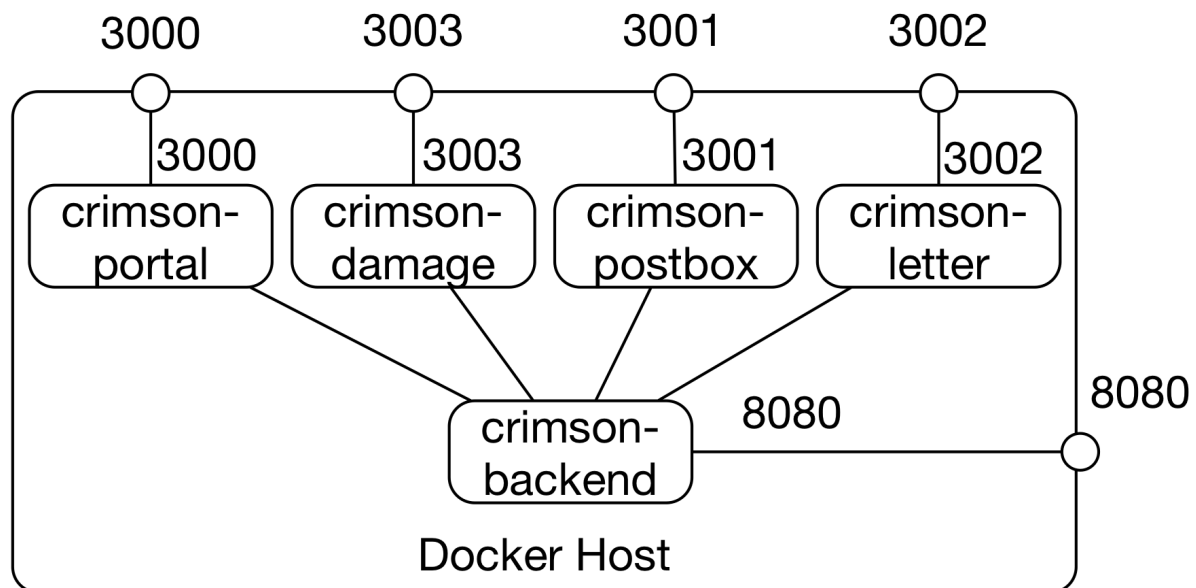
```
version: '3'
services:
  crimson-backend:
    image: educative1/mapi_crimson-assurance-demo_crimson-backend
    ports:
      - "8080:8080"
    environment:
      - PORT=8080
  crimson-portal:
    image: educative1/mapi_crimson-assurance-demo_crimson-portal
    ports:
      - "3000:3000"
    links:
      - crimson-backend
    environment:
      - PORT=3000
      - BACKEND_HOST=crimson-backend
      - BACKEND_PORT=8080
      - ROCA_URL=http://${CRIMSON_SERVER:-localhost}:3000
      - POSTBOX_URL=http://${CRIMSON_SERVER:-localhost}:3001
      - LETTER_URL=http://${CRIMSON_SERVER:-localhost}:3002
      - DAMAGE_URL=http://${CRIMSON_SERVER:-localhost}:3003
  crimson-damage:
    image: educative1/mapi_crimson-assurance-demo_crimson-damage
    ports:
      - "3003:3003"
    links:
      - crimson-backend
    environment:
      - PORT=3003
      - BACKEND_HOST=crimson-backend
      - BACKEND_PORT=8080
      - ROCA_URL=http://${CRIMSON_SERVER:-localhost}:3000
      - POSTBOX_URL=http://${CRIMSON_SERVER:-localhost}:3001
  crimson-postbox:
    image: educative1/mapi_crimson-assurance-demo_crimson-postbox
    ports:
      - "3001:3001"
    links:
      - crimson-backend
    environment:
      - SERVER_PORT=3001
      - lasRestServiceUrl=http://crimson-backend:8080
      - lasRocaUrl=http://${CRIMSON_SERVER:-localhost}:3000
      - ROCA_URL=http://${CRIMSON_SERVER:-localhost}:3000
  crimson-letter:
    image: educative1/mapi_crimson-assurance-demo_crimson-letter
    ports:
      - "3002:3002"
    links:
      - crimson-backend
    environment:
      - PORT=3002
      - BACKEND_HOST=crimson-backend
```

- BACKEND_PORT=8080
- ROCA_URL=http://\${CRIMSON_SERVER:-localhost}:3000
- POSTBOX_URL=http://\${CRIMSON_SERVER:-localhost}:3001



Network ports

The application is available at port 3000 on the Docker host. *Postbox* has port 3001, *letter* port 3002, and *damage* port 3003 (see the drawing below). The frontend services communicate with the backend, which runs in a separate Docker container.



Docker Containers in the Example

Of course, the ports of the Docker containers could be redirected to any other ports of the Docker host. Likewise, all applications in the Docker containers can use the same ports in each Docker container.

However, to save confusion, in this example, the port numbers of the containers are identical to those of the hosts.

You can also try the system directly on the web at Heroku (<https://crimson-portal.herokuapp.com/>). The links then point to the separate applications for *postbox*, *letter*, and *damage* also deployed at



Heroku. Heroku is a PaaS (Platform as a Service, see chapter 14 (<https://www.educative.io/collection/page/10370001/5441945024331776/5727581686988800>)) available in the public cloud.

In the next lesson, we'll look at a few variations to the approaches we've already discussed.

[← Back](#)

Other Integration Methods

[Next →](#)

Variations



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