

This PDF is a guide to use the application

step 1: download the repository or clone it .

Step 2: In the directory of the project (Microservices SSI), we see the following sub-directories

| | | | |
|-------------------------|-------------------|----------------------|------|
| config | 2/13/2025 3:57 PM | File folder | |
| frontend | 2/13/2025 2:02 PM | File folder | |
| microservices_project | 2/13/2025 2:02 PM | File folder | |
| zap | 2/13/2025 3:14 PM | File folder | |
| OWASP_ZAP_Testing_Guide | 2/15/2025 1:24 PM | Markdown Source File | 2 KB |

First, open powershell in the frontend and microservices project

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\achra\Microservices SSI> cd frontend
```

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\achra> cd "Microservices SSI"
PS C:\Users\achra\Microservices SSI> CD MICROSERVICES_PROJECT
PS C:\Users\achra\Microservices SSI\MICROSERVICES_PROJECT>
```

Don't forget to login to docker with this command: **docker login**

Then we build the images for each file containing docker-compose.yml with: **docker-compose up --build**

```
[+] Running 3/3g to docker.io/library/frontend-frontend:latest
✓Service frontend Built
✓Network frontend_default Created
✓Container frontend-frontend-1 Created
Attaching to frontend-1
```

```
=> => exporting manifest list sha256:c087081989f8ee4c9d6c5d75ec5324b6d48c44ca1c76b11177
✓Service product-service Built
[+] Running 6/7.5s (56/57)
=> => unpacking to docker.io/library/microservices_project-notification-service:latest
✓Service order-service Built
✓Service product-service Built
✓Service monitoring Built
✓Service notification-service Built
✓Service employee-service Built
[+] Building 20.1s (56/57)
✓Service order-service Built
[+] Building 20.3s (56/57)
✓Service monitoring Built
=> => unpacking to docker.io/library/microservices_project-notification-service:latest
✓Service notification-service Built
✓Service employee-service Built
[+] Running 6/7-service Built
[+] Building 20.4s (56/57)
=> => unpacking to docker.io/library/microservices_project-notification-service:latest
=> [employee-service] exporting to image
=> => exporting layers
✓Service order-service Built
[+] Building 20.5s (56/57)
=> => unpacking to docker.io/library/microservices_project-notification-service:latest
```

We may confront with this problem:

```
user-service-1 | * Serving Flask app 'app'
monitoring-1 | time=2025-02-14T16:08:20.793Z level=INFO source=main.go:764 msg="Leaving GOMAXPROCS=8: CPU quota undefined"
component=automaxprocs
user-service-1 | * Debug mode: on
Error response from daemon: Ports are not available: exposing port TCP 0.0.0.0:8080 -> 0.0.0.0:0: listen tcp 0.0.0.0:8080: bind: Only one usage of each socket address (protocol/network address/port) is normally permitted.
```

Not a big deal, it says that the port 8080 is already in use by another service

the solution is to search for the service that uses port 8080 (*netstat -ano | findstr :8080*), and terminate it with the command: *taskkill /PID <process id> /F*

```
Administrator: Windows PowerShell

Windows PowerShell
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PS C:\WINDOWS\system32> netstat -ano | findstr :8080
TCP        0.0.0.0:8080          0.0.0.0:0             LISTENING   6164
TCP        [::]:8080            [::]:0                 LISTENING   6164
PS C:\WINDOWS\system32> taskkill /PID 6164 /F
SUCCESS: The process with PID 6164 has been terminated.
PS C:\WINDOWS\system32>
```

Now we created the containers and the images to initiate the application

Containers [Give feedback](#)

View all your running containers and applications. [Learn more](#)

Container CPU usage
4.76% / 800% (8 CPUs available)

Container memory usage
336.52MB / 3.66GB

Show charts

☐ Only show running containers

| <input type="checkbox"/> | Name ↑ | Container ID | Image | Port(s) | CPU (%) | Last started | Actions |
|--------------------------|-------------------------|--------------|-------|---------|---------|--------------|--|
| <input type="checkbox"/> | > frontend | - | - | - | 0% | 1 hour ago | <input type="checkbox"/> ⋮ <input type="trash"/> |
| <input type="checkbox"/> | > microservices_project | - | - | - | 4.76% | 1 hour ago | <input type="checkbox"/> ⋮ <input type="trash"/> |

Container for the frontend:

frontend
C:\Users\achra\Microservices\SSI\frontend

View configurations

frontend-frontend-1
frontend-frontend
5173:80

```
"Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:135.0) Gecko/20100101 Firefox/135.0" "-"
2025-02-15 13:57:38 frontend-1 | 2025/02/15 12:57:38 [error] 34#34: *7 open() "/usr/share/nginx/html/robots.txt" failed (2: No such file or directory), client: 172.19.0.1, server: localhost, request: "GET /robots.txt HTTP/1.1", host: "localhost:5173"
2025-02-15 13:57:38 frontend-1 | 172.19.0.1 - - [15/Feb/2025:12:57:38 +0000] "GET /robots.txt HTTP/1.1" 404 555 "-"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36" "-"
2025-02-15 13:57:38 frontend-1 | 2025/02/15 12:57:38 [error] 34#34: *8 open() "/usr/share/nginx/html/sitemap.xml" failed (2: No such file or directory), client: 172.19.0.1, server: localhost, request: "GET /sitemap.xml HTTP/1.1", host: "localhost:5173"
2025-02-15 13:57:38 frontend-1 | 172.19.0.1 - - [15/Feb/2025:12:57:38 +0000] "GET /sitemap.xml HTTP/1.1" 404 555 "-"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36" "-"
2025-02-15 13:57:38 frontend-1 | 172.19.0.1 - - [15/Feb/2025:12:57:38 +0000] "GET / HTTP/1.1" 200 483 "-"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36" "-"
2025-02-15 13:57:38 frontend-1 | 2025/02/15 12:57:38 [error] 34#34: *9 open() "/usr/share/nginx/html/vite.svg" failed (2: No such file or directory), client: 172.19.0.1, server: localhost, request: "GET /vite.svg HTTP/1.1", host: "localhost:5173", referer: "http://localhost:5173/"
2025-02-15 13:57:38 frontend-1 | 172.19.0.1 - - [15/Feb/2025:12:57:38 +0000] "GET /vite.svg HTTP/1.1" 404 555 "http://localhost:5173/"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36" "-"
2025-02-15 13:57:38 frontend-1 | 172.19.0.1 - - [15/Feb/2025:12:57:38 +0000] "GET /assets/index-BIa41e2E.css HTTP/1.1" 200 9810 "http://localhost:5173/"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36" "-"
2025-02-15 13:57:38 frontend-1 | 172.19.0.1 - - [15/Feb/2025:12:57:38 +0000] "GET /assets/index-C-RlZy7.js HTTP/1.1" 200 165227 "http://localhost:5173/"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36" "-"
2025-02-15 14:08:33 frontend-1 | 172.19.0.1 - - [15/Feb/2025:13:08:33 +0000] "GET / HTTP/1.1" 304 0 "-"
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/133.0.0.0 Safari/537.36 Edg/133.0.0.0" "-"
```

Container for the services:

microservices_proj...

jaegertracing/all-in-one

14250:14250

Show all ports (9)

microservices_proj...

grafana/grafana

3000:3000

microservices_proj...

microservices_projec

microservices_proj...

microservices_projec

microservices_proj...

microservices_projec

9090:9090

microservices_proj...

microservices_projec

microservices_proj...

microservices_projec

| | | | | | |
|---------------------|-------------------|------------|---|---|-----|
| 2025-02-15 14:15:18 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:15:33 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:21:06 | order-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:21:21 | order-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:21:36 | order-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:15:48 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:16:03 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:16:18 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:16:33 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:16:48 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:17:03 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:17:18 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:17:33 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:17:48 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:18:03 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:18:18 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:18:33 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:18:48 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:19:03 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:19:18 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:19:33 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:19:48 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:20:03 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:20:18 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:20:33 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:20:48 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:21:03 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:21:18 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:21:33 | product-service-1 | 172.18.0.7 | - | - | [1] |
| 2025-02-15 14:21:48 | product-service-1 | 172.18.0.7 | - | - | [1] |

The application is now available in <http://localhost:5173/>

Products

Add New

| NAME | PRICE | STOCK | Actions |
|-------------------|-------|-------|---------|
| No data available | | | |

Customers

Add New

| NAME | EMAIL | PHONE | Actions |
|-------------------|-------|-------|---------|
| No data available | | | |

Orders

Add New

TO CHECK THE TRACES , WE NEED TO VISITE JAEGER IN ITS PORT , AND TO TEST VULNs ,
OPEN OWASP ZAP .