

# DELIVERABLE 4 DEPLOYMENT

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## COPD Diagnosis & Management App - Project Deployment

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Term: Fall 2019

Team Name: Cyberlife

Project: #48 COPD Identify & Manage 2

### Team Details

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#### Team Members:

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#### TA Mentor:

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#### Quick Description of Application

This is an application that would help patients self-diagnose their COPD symptoms as well as manage their health indicators. Once a high risk of COPD is diagnosed in the app, the patients could choose to make appointments with their doctors and manage these appointments. There is also a daily health record function available for patients so they can manage their health status. Last but not least, a learning section is launched to educate COPD patients and provide suggestions on their daily exercises.

### Deployment Details

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#### Drone configuration

##### Namespace

The global namespace is defined in *values.yaml*.

```
global:
  namespace: copd-identify-manage-2
```

#### Back-end application configuration

In *.drone.yml*, *environment* defines to build the back-end application in production mode and make swagger active.

```
environment:
  SPRING_PROFILES_ACTIVE: prod,swagger
```

The docker file *web-dockerfile* shown below defines the steps to build the back-end application by Maven and sets the entrypoint of the container.

```
FROM maven:3.6-jdk-8 as builder

RUN mkdir -p /web
WORKDIR /web

COPY ./web /web

# RUN mvn clean spring-boot:run -Dspring-boot.run.profiles=prod
RUN mvn clean package -Dspring-boot.run.profiles=prod

ENTRYPOINT ["java","-Djava.security.egd=file:/dev/./urandom","-jar","/web/target/copdmanage-0.0.1-SNAPSHOT.jar"]
```

In *values.yaml*, the configuration information of the back-end application is shown below.

```
backend:
  name: cim2backend
  port: 80
  replicaCount: 1
  proxy:
    incomingPath: /cim2web/
    containerPath: "/"
  image:
    repository: build.hdap.gatech.edu/cim-web
    tag: latest
    pullPolicy: Always
  env:
    SPRING_PROFILES_ACTIVE: prod,swagger
```

## Front-end application configuration

The docker file *app-dockerfile* shown below defines the steps to build the front-end application by Node.js.

```
FROM node:12.13.0 as builder

RUN mkdir -p /app
WORKDIR /app

COPY ./app /app
RUN rm -rf node_modules
RUN rm -f package-lock.json

RUN npm install
RUN npm run build
```

In *values.yaml*, the configuration information of the front-end application is shown below.

```
frontend:
  name: cim2frontend
  port: 80
  replicaCount: 1
  proxy:
    incomingPath: /cim2app/
    containerPath: "/"
  image:
    repository: build.hdap.gatech.edu/cim-app
    tag: latest
    pullPolicy: Always
```

## Load balancer configuration

Load balancer is defined in the docker file *app-dockerfile* shown below and configured with customized *default.conf*.

```
FROM nginx:1.17.4
COPY --from=builder ./app/dist /usr/share/nginx/html/
COPY ./nginx/default.conf /etc/nginx/conf.d
```

## Database configuration

In *values.yaml*, the configuration information of the database is shown below.

```
database:
  name: cim2database
  port: 5432
  replicaCount: 1
  image:
    repository: postgres
    tag: latest
    pullPolicy: Always
```

## Link to drone.yml

<https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/blob/master/.drone.yml>

## Link to values.yaml

<https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/blob/master/values.yaml>

## Link to any other deployment files

<https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/tree/master/Deliverable%20Deployment/Deployment%20File>

## Github Repository

Link: <https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2/tree/master/Deliverable%20Deployment/Deployment%20File>

Branch: master

Final Commit ID: 1025df72040241fcf7582a6f5a2ca649440ee3ef

# Deployed Application

## Drone Build Logs Screenshot


Repositories → gt-cs6440-hit-fall2019/COPD-Identify-Manage-2 → #55

COPD-Identify-Manage-2

[VIEW SOURCE </>](#)[RESTART ↻](#)

← ACTIVITY FEED

✓ #55. Update carousel and redirect logics.

 yding369 pushed 0ed10924 to master

04:27 · 3 days ago

✓ default04:27

✓ clone00:03

✓ docker04:24

✓ cim-web01:38

✓ cim-app01:49

✓ get\_chart\_builder00:11

✓ copy\_namespace00:02

✓ deploy\_to\_k8s00:41

✓ default04:27

✓ clone00:03

✓ docker04:24

✓ cim-web01:38

✓ cim-app01:49

✓ get\_chart\_builder00:11

✓ copy\_namespace00:02

✓ deploy\_to\_k8s00:41

default — clone 00:03

```
1 Initialized empty Git repository in /drone/src/.git/
2 + git fetch origin +refs/heads/master:
3 From https://github.gatech.edu/gt-cs6440-hit-fall2019/COPD-Identify-Manage-2
4 * branch master -> FETCH_HEAD
5 * [new branch] master -> origin/master
6 + git checkout 0ed10924fdbd6d448ff79f121cd75381ea90ec9d -b master
7 Already on 'master'
```

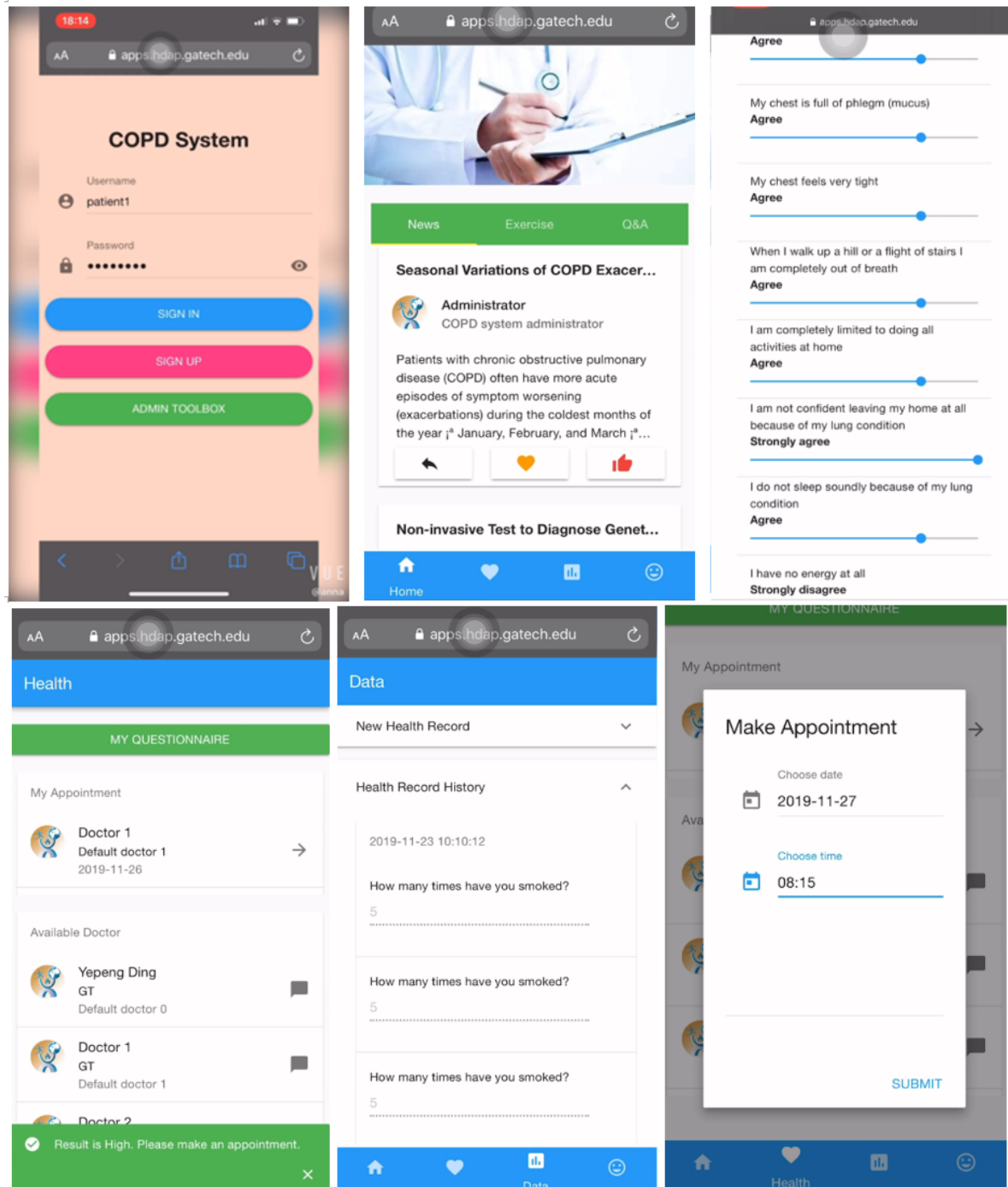
default — deploy\_to\_k8s 00:41

```
--
93 19d2e6414e5f: Verifying Checksum
94 19d2e6414e5f: Download complete
95 19d2e6414e5f: Pull complete
96 26950ee3a360: Pull complete
97 d51fb5c79a14: Pull complete
98 605bf27dabf7: Pull complete
99 0a18a09290b6: Pull complete
100 c13ef6beab27: Pull complete
101 Digest: sha256:f80e39ad3eb684cdcb9f2753b0285819794606c4fda5e6b8b7be42b5bed2790
102 Status: Downloaded newer image for build.hdap.gatech.edu/hdap_helm_prj_deployer_cs644
0:1.0.0
103 --> 12c45ffec751
104 Step 5/6 : ENV NAMESPACE copd-identify-manage-2
105 --> Running in 81c53c10c51e
106 Removing intermediate container 81c53c10c51e
107 --> b25d753e8edf
108 Step 6/6 : COPY --from=templateBuilder /apps/helm/${K8S_CONFIG_FILE} ${K8S_CONFIG_FILE}
109 --> c0282d64bc26
110 Successfully built c0282d64bc26
111 Successfully tagged deploytok8s:latest
112 + docker run deploytok8s
113 deployment.extensions "cim2backend" deleted
114 deployment.extensions "cim2database" deleted
115 deployment.extensions "cim2frontend" deleted
116 service "cim2backend-service" deleted
117 service "cim2database-service" deleted
118 service "cim2frontend-service" deleted
119 configmap "cim2backend-configmap" deleted
120 No resources found
121 configmap/cim2backend-configmap created
122 service/cim2backend-service created
123 service/cim2database-service created
124 service/cim2frontend-service created
125 deployment.extensions/cim2backend created
126 deployment.extensions/cim2database created
127 deployment.extensions/cim2frontend created
```

# Rancher Container Running Screenshot

Namespace: copd-identify-manage-2			
<input type="checkbox"/>	Active	cim2backend	build hdap.gatech.edu/cim-web:latest 1 Pod / Created 4 hours ago
<input type="checkbox"/>	Active	cim2database	postgres:latest 1 Pod / Created 4 hours ago
<input type="checkbox"/>	Active	cim2frontend	build hdap.gatech.edu/cim-app:latest 1 Pod / Created 4 hours ago

## Application Screenshot (Running)



## Steps to run app and login information

The app link on HDAP is here: <https://apps.hdap.gatech.edu/cim2app/>

Login user name and password for patients:

<b>Username</b>	<b>Password</b>
patient	patient
patient1	patient1
patient2	patient2

Once logged in, the four buttons below would guide the user to "Main Page: patient education", "COPD self-diagnosis survey and doctor reservation", "Health Record Management" and "Setting".

Login user name for doctors:

<b>Username</b>	<b>Password</b>
doctor	doctor
doctor1	doctor1
doctor2	doctor2

In the doctor portal, after clicking on the second button, the doctors can see reservations from patients.

The admin box on the front page is for publishing new articles.