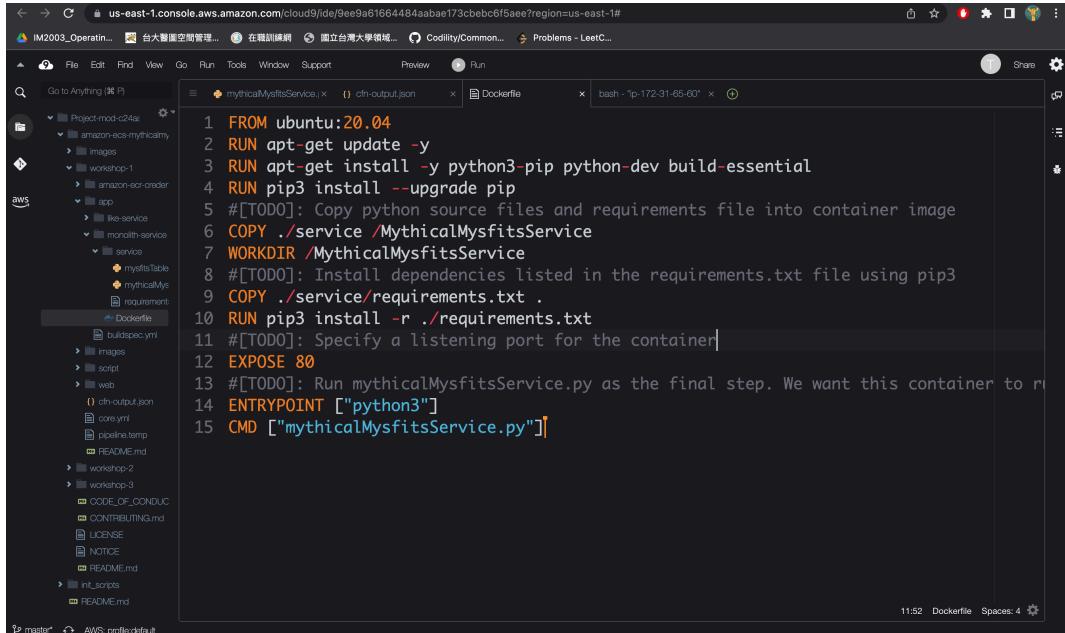


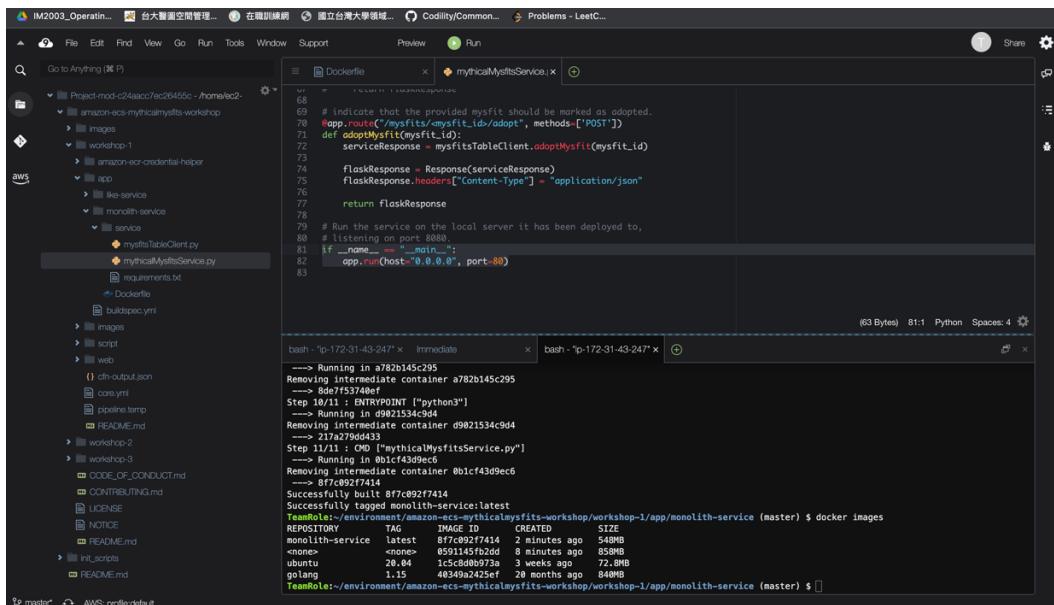
Lab 1

1. Final Dockerfile



```
1 FROM ubuntu:20.04
2 RUN apt-get update -y
3 RUN apt-get install -y python3-pip python-dev build-essential
4 RUN pip3 install --upgrade pip
5 #[TODO]: Copy python source files and requirements file into container image
6 COPY ./service /MythicalMysfitsService
7 WORKDIR /MythicalMysfitsService
8 #[TODO]: Install dependencies listed in the requirements.txt file using pip3
9 COPY ./service/requirements.txt .
10 RUN pip3 install -r ./requirements.txt
11 #[TODO]: Specify a listening port for the container
12 EXPOSE 80
13 #[TODO]: Run mythicalMysfitsService.py as the final step. We want this container to run
14 ENTRYPOINT ["python3"]
15 CMD ["mythicalMysfitsService.py"]
```

2. Docker Build



```
68 # indicate that the provided myfit should be marked as adopted.
69 #app.route('/mysts/mysfit//adopt', methods=['POST'])
70 def adoptMysfit(mysfit_id):
71     serviceResponse = myfitsTableClient.adoptMysfit(mysfit_id)
72
73     flaskResponse = Response(serviceResponse)
74     flaskResponse.headers["Content-Type"] = "application/json"
75
76     return flaskResponse
77
78 # Run the service on the local server it has been deployed to,
79 # listening on port 8000
80 if __name__ == "__main__":
81     app.run(host="0.0.0.0", port=80)
```

bash - *ip-172-31-43-247* x Immediate bash - *ip-172-31-43-247*

```
--> Starting in a782b145c295
Removing intermediate container a782b145c295
--> 8de7f53740af
Step 10/11 : ENTRYPOINT ["python3"]
--> d9e021534c9d4
Removing intermediate container d9e021534c9d4
--> 217a2796d451
Step 11/11 : CMD ["mythicalMysfitsService.py"]
--> Running in 8b1cf4349e9c6
Removing intermediate container 8b1cf4349e9c6
--> 8f7c092f7414
Successfully built 8f7c092f7414
Tagged myfit/mysfits:latest
TeamRole:/environment/amazon-ecs-mythicalmysfits-workshop-1/app/monolith-service:latest
REPOSITORY TAG IMAGE ID CREATED SIZE
monolith-service latest 8f7c092f7414 2 minutes ago 540MB
<none> <none> 0591145fb2d0 8 minutes ago 850MB
ubuntu 20.04 1c5c8d0b9738 3 weeks ago 72.8MB
golang 1.15 40349a0425ef 20 months ago 840MB
```

3. Curl result

```

# Indicate that the provided myfit should be marked as adopted.
@app.route("/myfits/<mymfit_id>/adopt", methods=['POST'])
def adoptMysfit(mysfit_id):
    serviceResponse = myfitsTooleClient.adoptMysfit(mysfit_id)

    flaskResponse = Response(serviceResponse)
    flaskResponse.headers["Content-Type"] = "application/json"

    return flaskResponse

# Run the service on the local server it has been deployed to,
# listening on port 8080.
if __name__ == "__main__":
    app.run(host='0.0.0.0', port=80)

```

```

bash - ip-172-31-43-247 x Immediate docker - ip-172-31-43-24 x bash - ip-172-31-43-247 x
TeamRole:/>environment curl http://localhost:8080/myfits
[{"mymfit": {"id": "a6b1bb08-1085-42f5-ab77-7479a14300", "name": "Haila", "godevil": "Good", "lawchaos": "Neutral", "species": "Haeta e", "thumbImageUri": "https://www.mythicalmyfits.com/images/haetae_thumb.png"}, {"mymfit": {"id": "b6d16e02-6aeb-413c-b457-321151bb463d", "name": "Ruijin", "godevil": "Evil", "lawchaos": "Troll", "species": "Troll", "thumbImageUri": "https://www.mythicalmyfits.com/images/rol_thumb.png"}, {"mymfit": {"id": "c6084344-1eb7-4e07-b334-0ed23ac9268c", "name": "Nan Tianlans", "godevil": "Neutral", "lawchaos": "Neutral", "species": "Mandrake", "thumbImageUri": "https://www.mythicalmyfits.com/images/mandrake_thumb.png"}, {"mymfit": {"id": "d630901a-1000-4a0b-a30a-43a0a4a0a0", "name": "Gretta", "godevil": "Evil", "lawchaos": "Neutral", "species": "Gretta", "thumbImageUri": "https://www.mythicalmyfits.com/images/gretta_thumb.png"}, {"mymfit": {"id": "310f196c-487b-43af-9e29-6522a715342d", "name": "Gary", "godevil": "Neutral", "lawchaos": "Chaotic", "species": "Kraiken", "thumbImageUri": "https://www.mythicalmyfits.com/images/kraiken_thumb.png"}, {"mymfit": {"id": "a3c95f3-e840-4e4e-a665-91dd022487c7", "name": "Twil light glitter", "godevil": "Good", "lawchaos": "Neutral", "species": "Twilight", "thumbImageUri": "https://www.mythicalmyfits.com/images/twilight_gleam_thumb.png"}, {"mymfit": {"id": "e637d916-f908-4771-825-61b72b2c1bd", "name": "CoCo", "godevil": "Neutral", "lawchaos": "Neutral", "species": "Coco", "thumbImageUri": "https://www.mythicalmyfits.com/images/coco_thumb.png"}, {"mymfit": {"id": "4e53920c-505a-4a00-a694-09380791f00e", "name": "Pauly", "godevil": "Neutral", "lawchaos": "Neutral", "species": "Pauly", "thumbImageUri": "https://www.mythicalmyfits.com/images/pauly_thumb.png"}, {"mymfit": {"id": "b4ff031-141e-48d-bb5-15ba22beab03", "name": "Snowflake", "godevil": "Evil", "lawchaos": "Neutral", "species": "Snowflake", "thumbImageUri": "https://www.mythicalmyfits.com/images/snowflake_thumb.png"}, {"mymfit": {"id": "2ba47393-1a8f-4037-954c-9a033333", "name": "Yeti", "godevil": "Neutral", "lawchaos": "Neutral", "species": "Yeti", "thumbImageUri": "https://www.mythicalmyfits.com/images/yeti_thumb.png"}, {"mymfit": {"id": "33e1f0d4-2fd8-45fb-a42f-f92551694598", "name": "Cole", "godevil": "Good", "lawchaos": "Chaotic", "species": "Phoenix", "thumbImageUri": "https://www.mythicalmyfits.com/images/phoenix_thumb.png"}]

```

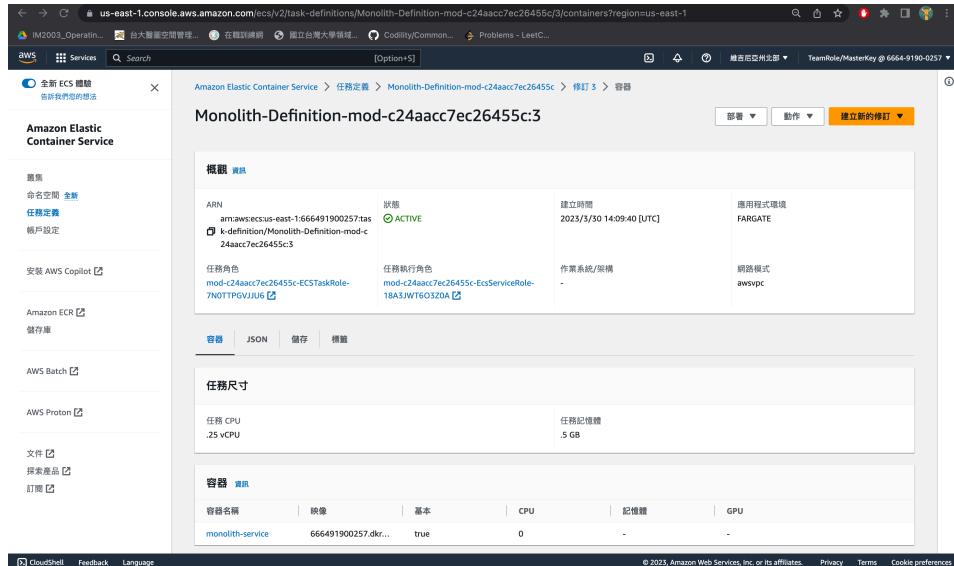
4. Docker pushes the layers up to ECR

Amazon ECR > 倉庫 > mod-c24aacc7ec26455c-mono-bubnsw4hgjt

映像 (1)	刪除	詳細資訊	排播
<input type="checkbox"/> 尋找映像	C	刪除	詳細資訊
<input type="checkbox"/> 映像標籤 ▾ 成品類型	推送時間 ▾	大小 ▾	映像 URI
<input type="checkbox"/> latest	2023年3月 30日,	195.87	複製 URI
	16:51:59 (UTC+08)		sha256:75925dd625c852...
			-
			-

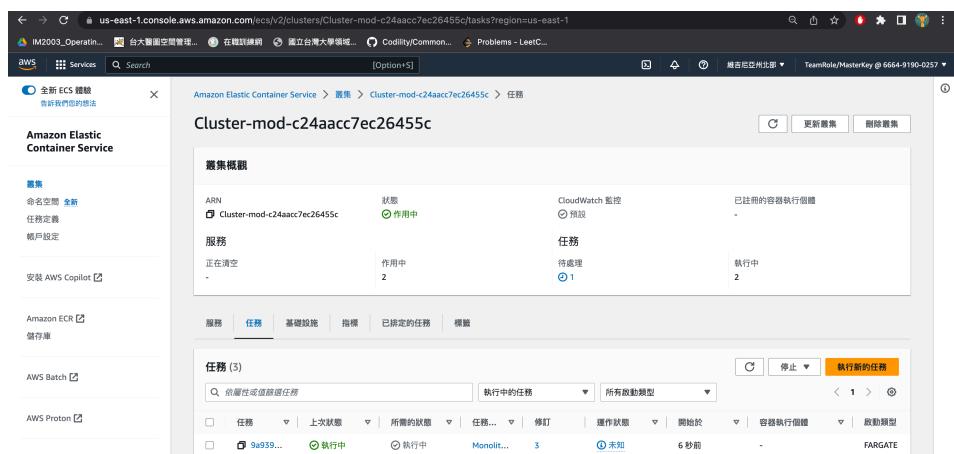
Lab 2

1. Create new task



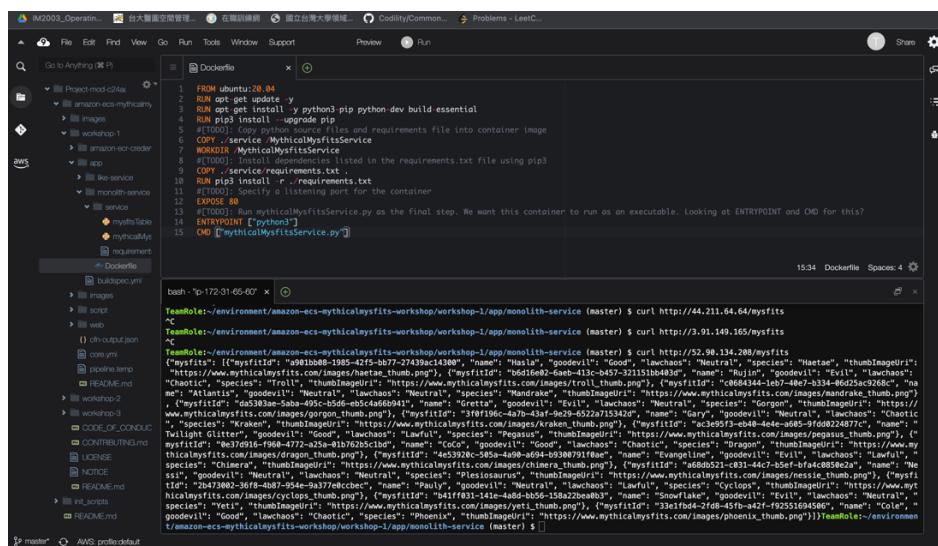
The screenshot shows the AWS ECS console interface. A task definition named 'Monolith-Definition-mod-c24aacc7ec26455c' is being created. The task uses the 'monolith-service' container image, which has a memory limit of 5 GB and a CPU limit of 25 vCPU. The task is set to use FARGATE as the compute environment.

2. Run task



The screenshot shows the AWS ECS console interface. The cluster 'Cluster-mod-c24aacc7ec26455c' is selected. One task, '9a939...', is currently executing. The task is associated with the 'monolith-service' container image.

3. curl http://TASK_PUBLIC_IP_ADDRESS/mysfits



```
1 FROM ubuntu:20.04
2 RUN apt-get update
3 RUN apt-get install -y python3-pip python-dev build-essential
4 RUN pip3 install --upgrade pip
5 #TOD001: Copy python source files and requirements file into container
6 COPY ./service /MythicalMysfitsService
7 #TOD001: Copy requirements.txt into container
8 #TOD001: Install python dependencies listed in the requirements.txt file using pip3
9 COPY ./service/requirements.txt .
10 RUN pip3 install -r ./requirements.txt
11 EXPOSE 80
12 #TOD001: Run mythicalMysfitsService.py as the final step. We want this container to run as an executable. Looking at ENTRYPOINT and CMD for this?
13 #TOD001: Run mythicalMysfitsService.py as the final step. We want this container to run as an executable. Looking at ENTRYPOINT and CMD for this?
14 #TOD001: Run mythicalMysfitsService.py as the final step. We want this container to run as an executable. Looking at ENTRYPOINT and CMD for this?
15 CMD ["mythicalMysfitsService.py"]
```

The terminal shows the execution of a Dockerfile to build a container image for 'amazon-ecs-mythicalmysfits'. The Dockerfile copies the service code and requirements file into the container. The terminal then runs the container and executes the 'mythicalMysfitsService.py' script. Finally, it runs the curl command to access the 'mysfits' endpoint of the task.

4. CloudWatch Logs dashboard

The screenshot shows the CloudWatch Logs dashboard for a log group named 'mod-c24aacc7ec26455c-MythicalMonolithLogGroup-v220TmoTG3i'. The log entries are as follows:

- 2023-03-30T22:14:41.000+08:00 * Serving Flask app "mythicalMysfitsService" (lazy loading)
- 2023-03-30T22:14:41.000+08:00 * Environment: production
- 2023-03-30T22:14:41.000+08:00 WARNING: This is a development server. Do not use it in a production deployment.
- 2023-03-30T22:14:41.000+08:00 Use a production WSGI server instead.
- 2023-03-30T22:14:41.000+08:00 * Debug mode: off
- 2023-03-30T22:14:41.001+08:00 * Running on http://0.0.0.0:80/ (Press CTRL+C to quit)
- 2023-03-30T22:16:03.842+08:00 1.160.50.181 - - [30/Mar/2023 14:16:03] " [37mGET / HTTP/1.1 [0m" 200 -
- 2023-03-30T22:16:04.107+08:00 1.160.50.181 - - [30/Mar/2023 14:16:04] " [33mGET /favicon.ico HTTP/1.1 [0m" 404 -
- 2023-03-30T22:17:30.667+08:00 3.238.188.33 - - [30/Mar/2023 14:17:30] " [37mGET /mysfits HTTP/1.1 [0m" 200 -
- 2023-03-30T22:17:30.667+08:00 INFO[werkzeug:3.238.188.33] - - [30/Mar/2023 14:17:30] " [37mGET /mysfits HTTP/1.1 [0m" 200 -

5. Stop the task

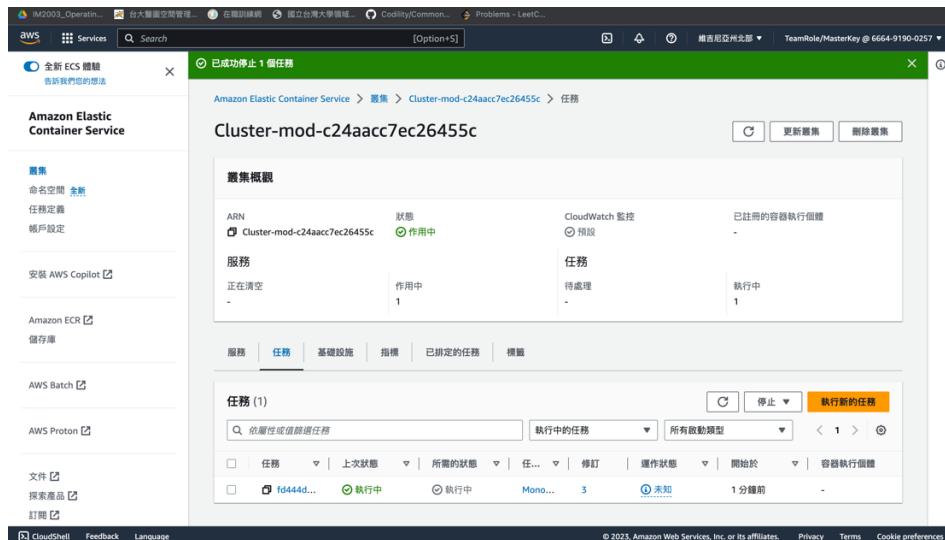
The screenshot shows the Amazon Elastic Container Service (ECS) console. A modal dialog titled '停止 1 個任務？' (Stop 1 task?) is displayed, asking if the user wants to stop a task named 'Monolith-Definition-mo...'. The task details are as follows:

任務	任務定義: 修訂	開始於
9a95901782f54729...	Monolith-Definition-mo...	-

At the bottom of the dialog, there are '取消' (Cancel) and '停止' (Stop) buttons. The background shows the ECS service list with one task listed under the cluster 'Cluster-mod-c24aacc7ec26455c'.

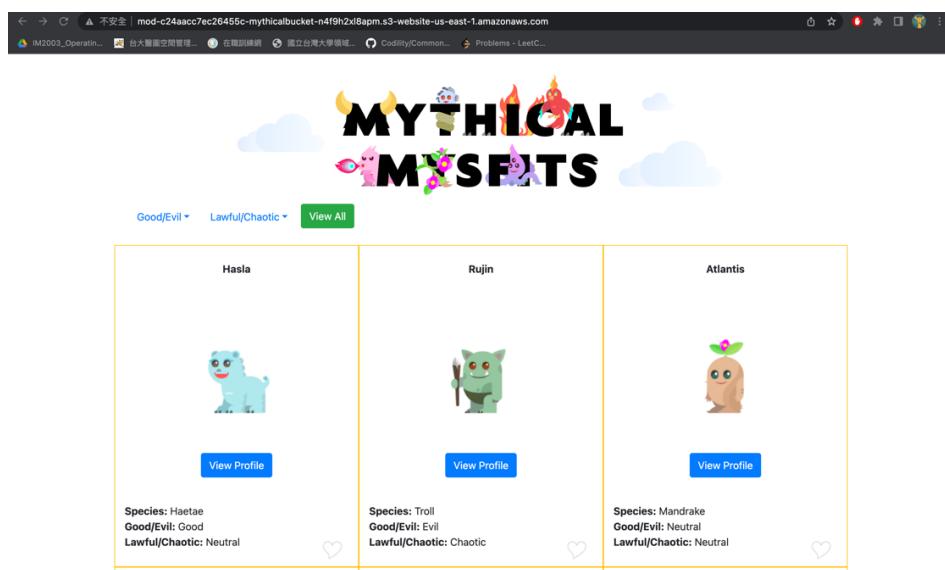
Lab 3

1. Update the service to use your task definition



The screenshot shows the AWS Elastic Container Service (ECS) Cluster overview page. The cluster 'Cluster-mod-c24aacc7ec26455c' is displayed with one task running. The task details show it's an EC2 instance with CloudWatch monitoring enabled. The tabs at the bottom include Services, Tasks (selected), Infrastructure, Metrics, Scheduled, and Logs.

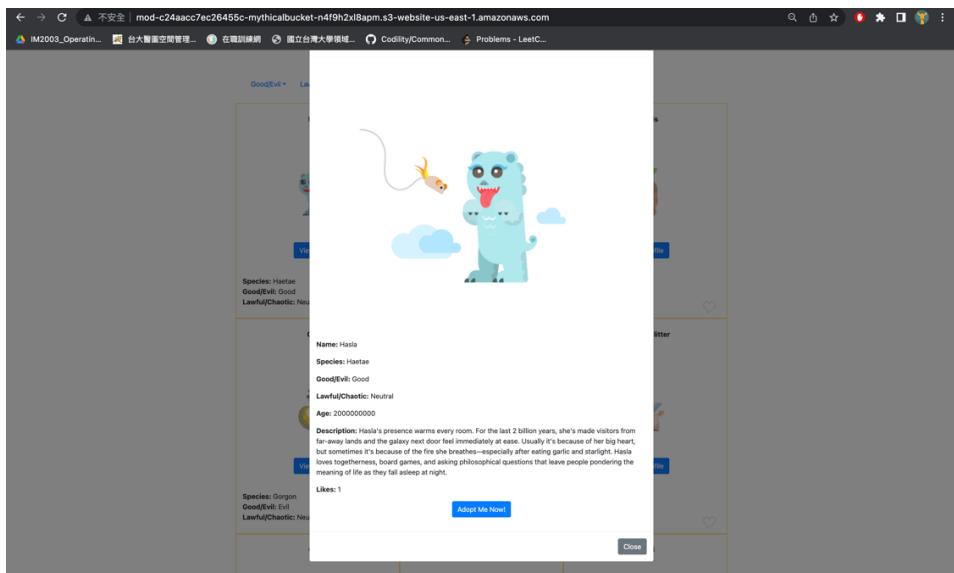
2. Access the website at http://BUCKET_NAME.s3-website.REGION.amazonaws.com



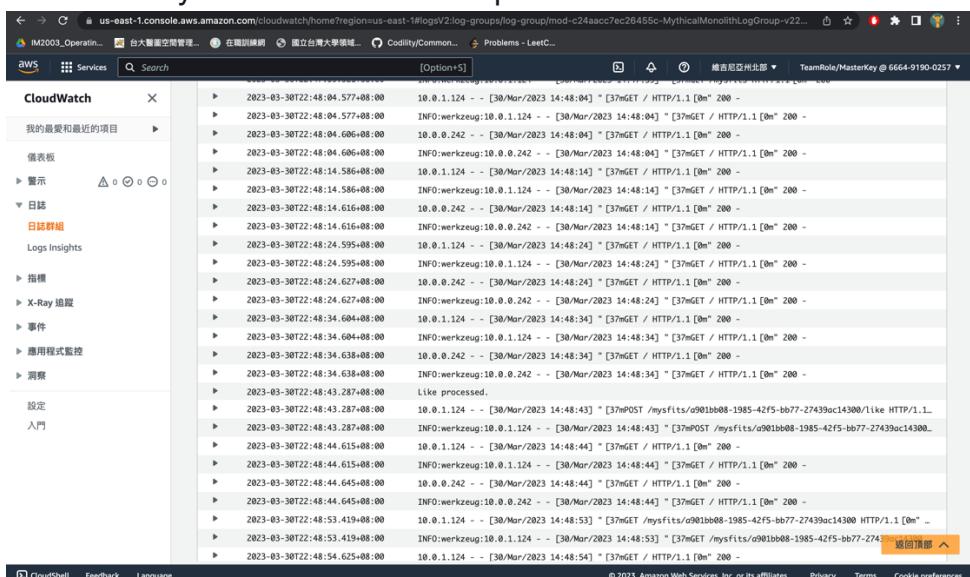
The screenshot shows the 'Mythical Mysfits' website. It displays three characters:

- Hasla**: Species: Haetae, Good/Evil: Good, Lawful/Chaotic: Neutral. View Profile button and heart icon below.
- Rujin**: Species: Troll, Good/Evil: Evil, Lawful/Chaotic: Chaotic. View Profile button and heart icon below.
- Atlantis**: Species: Mandrake, Good/Evil: Neutral, Lawful/Chaotic: Neutral. View Profile button and heart icon below.

3. Click the heart icon to like a Mysfit

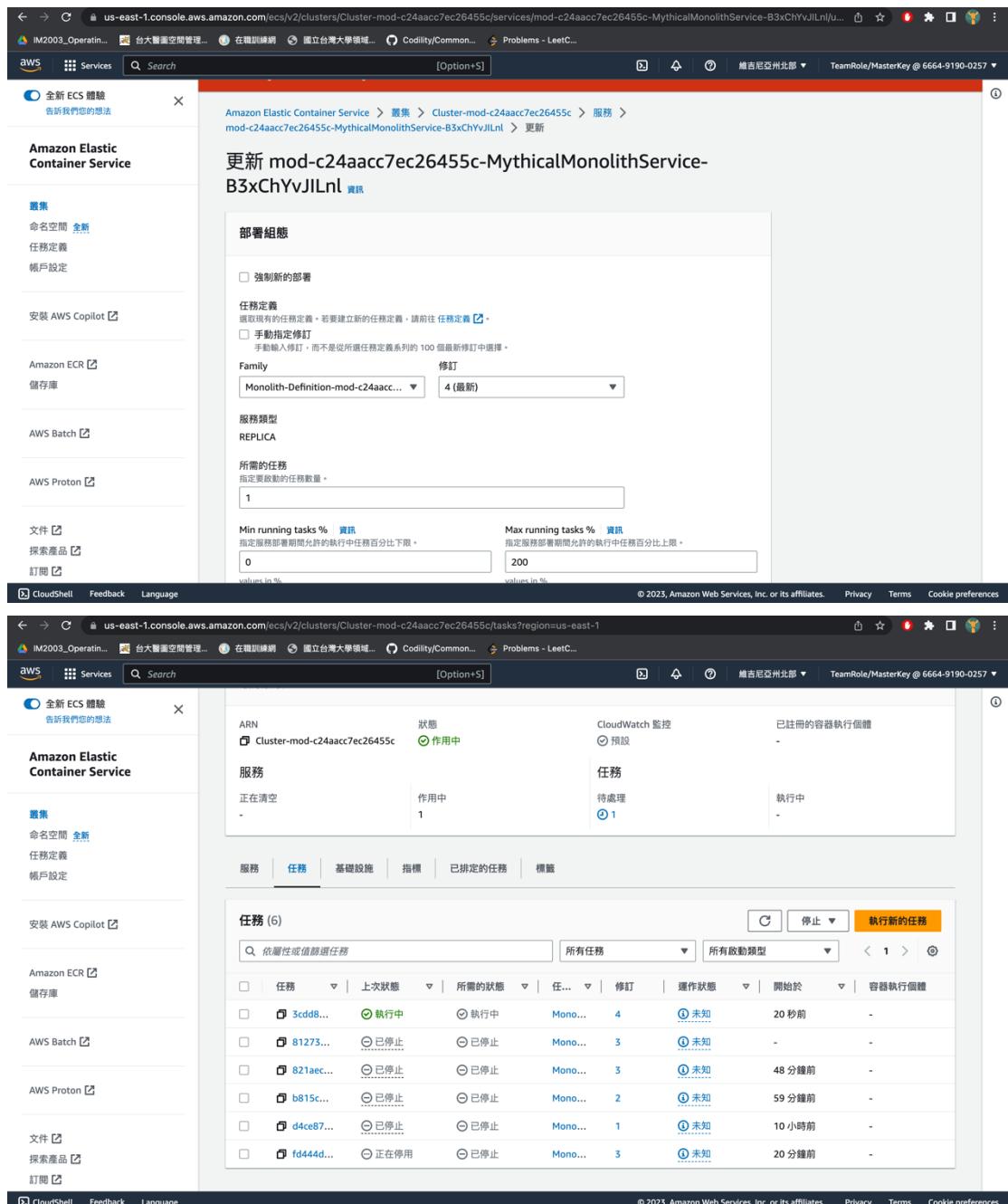


4. Ensure that you can see the "Like processed."



Lab 4

1. Create new task definition revision and update a service



The screenshot shows two separate AWS CloudWatch Metrics console pages. The top page displays the Metrics Insights dashboard with various metrics and filters applied. The bottom page shows the Metrics details for a specific metric named 'CPUUtilization'. Both pages include navigation bars, search fields, and standard AWS branding.

2. Create a new Task Definition for the like service

us-east-1.console.aws.amazon.com/ecs/v2/clusters/Cluster-mod-c24aacc7ec26455c/services?region=us-east-1

IM2003_Operation... 台大醫圖空間管理... 在職訓練網 健立台灣大學領域... Codility/Common... Problems - LeetCode... TeamRole/MasterKey @ 6664-9190-0257

aws Services Search [Option+S]

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Amazon Elastic Container Service

叢集

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任務定義
帳戶設定

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Amazon ECR 倉庫

AWS Batch

AWS Proton

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訂閱

CloudShell Feedback Language

us-east-1.console.aws.amazon.com/ecs/v2/clusters/Cluster-mod-c24aacc7ec26455c/services?region=us-east-1

台大醫圖空間管理... 在職訓練網 健立台灣大學領域... Codility/Common... Problems - LeetCode... TeamRole/MasterKey @ 6664-9190-0257

aws Services Search [Option+S]

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Amazon Elastic Container Service > 叢集 > Cluster-mod-c24aacc7ec26455c > 服務

Cluster-mod-c24aacc7ec26455c

更新叢集 刪除叢集

叢集概觀

ARN	狀態	CloudWatch 監控	已註冊的容器執行個體
Cluster-mod-c24aacc7ec26455c	作用中	預設	-
服務		任務	
正在清空	作用中	待處理	執行中
-	2	-	1

服務 任務 基礎設施 指標 已排定的任務 標籤

服務 (2) 資訊

服務名稱	狀態	ARN	服務類型	部署和任務
mod-c24aacc7ec26455c-MythicalMon...	作用中	arn:aws:ecs...	REPLICA	1 個執行中的...
mysfits-like-service	作用中	arn:aws:ecs...	REPLICA	0 個執行中的...

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us-east-1.console.aws.amazon.com/ecs/v2/clusters/Cluster-mod-c24aacc7ec26455c/services?region=us-east-1

台大醫圖空間管理... 在職訓練網 健立台灣大學領域... Codility/Common... Problems - LeetCode... TeamRole/MasterKey @ 6664-9190-0257

aws Services Search [Option+S]

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us-east-1.console.aws.amazon.com/ecs/v2/clusters/Cluster-mod-c24aacc7ec26455c/services?region=us-east-1

台大醫圖空間管理... 在職訓練網 健立台灣大學領域... Codility/Common... Problems - LeetCode... TeamRole/MasterKey @ 6664-9190-0257

aws Services Search [Option+S]

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Cluster-mod-c24aacc7ec26455c

更新叢集 刪除叢集

叢集概觀

ARN	狀態	CloudWatch 監控	已註冊的容器執行個體
Cluster-mod-c24aacc7ec26455c	作用中	預設	-
服務		任務	
正在清空	作用中	待處理	執行中
-	2	-	2

服務 任務 基礎設施 指標 已排定的任務 標籤

服務 (2) 資訊

服務名稱	狀態	ARN	服務類型	部署和任務
mod-c24aacc7ec26455c-MythicalMon...	作用中	arn:aws:ecs...	REPLICA	1 個執行中的...
mysfits-like-service	作用中	arn:aws:ecs...	REPLICA	1 個執行中的...

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3. Pushed image tagged as nolike2

Amazon ECR > 儲存庫 > mod-c24aacc7ec26455c-mono-3ge4rufuudvy

映像	推送時間	大小 (MB)	映像 URI	摘要	掃描狀態
nolike2	2023年3月30日, 23:33:39 (UTC+08)	195.87	sha256:59ecde5c8052c9b...	-	-
nolike	2023年3月30日, 23:24:39 (UTC+08)	195.87	sha256:9033db301fc765...	-	-
latest	2023年3月30日, 21:50:17 (UTC+08)	195.87	sha256:124ba201c56092...	-	-

4. Update the monolith service to use the new Task Definition, and make sure the app still functions as before

