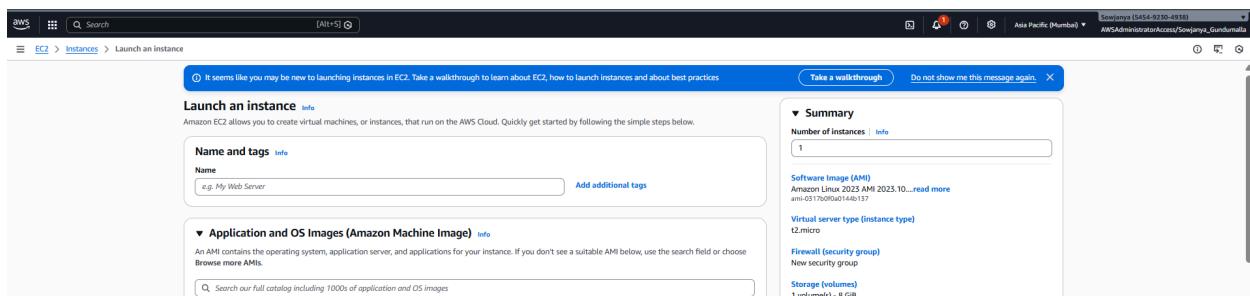


**Mydomain:** [studiomoonbear.com](http://studiomoonbear.com)

**Loadbalancer:** <http://travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com/>

## BACKEND:

- The Travel Memory backend repository was cloned onto the EC2 instance and dependencies were installed.
- Environment variables were configured to connect the backend to MongoDB Atlas and define the application port.
- The backend server was started and verified to be running on the configured port.
- PM2 was used to manage the backend process to ensure continuous operation.
- Nginx was configured as a reverse proxy to forward incoming HTTP requests to the backend service.
- The backend API was successfully tested using the /hello endpoint.



[EC2](#) > [Instances](#) > Launch an instance

Name: travelmemory-ec2 | Add additional tags

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An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose [Browse more AMIs](#).

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**Amazon Machine Image (AMI)**

Amazon Linux 2023 kernel-6.1 AMI  
ami-0317b0f0a0144b137 (64-bit (x86), uefi-preferred) / ami-04d97c21647e6cefe (64-bit (Arm), uefi)  
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

**Description**  
Amazon Linux 2023 (kernel-6.1) is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

Amazon Linux 2023 AMI 2023.10.20260202.2 x86\_64 HVM kernel-6.1

Architecture	Boot mode	AMI ID	Publish Date	Username
64-bit (x86)	uefi-preferred	ami-0317b0f0a0144b137	2026-02-03	ec2-user

[EC2](#) > [Instances](#) > i-06354939680d1d1d8

**EC2**

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- Network & Security**
  - Security Groups
  - Elastic IPs
  - Placement Groups
  - Key Pairs
  - Network Interfaces

**Instance summary for i-06354939680d1d1d8 (travelmemory-ec2) [Info](#)**

Updated less than a minute ago

Details	Status and alarms	Monitoring	Security	Networking	Storage	Tags
<b>Instance details <a href="#">Info</a></b> <ul style="list-style-type: none"> <li><b>AMI ID</b>: ami-0317b0f0a0144b137</li> <li><b>AMI name</b>: al2023-ami-2023.10.20260202.2-kernel-6.1-x86_64</li> <li><b>Stop protection</b>: Disabled</li> </ul>	<b>Monitoring</b> : disabled	<b>Allowed image</b> : -	<b>Platform details</b> : Linux/UNIX			
<b>Private IP address</b> : 13.126.84.211   <a href="#">open address</a>	<b>Instance state</b> : <span style="color: green;">Running</span>	<b>Private IP DNS name (IPv4 only)</b> : ip-172-31-7-42.ap-south-1.compute.internal	<b>Public IP addresses</b> : 172.31.7.42			
<b>IPv6 address</b> : -	<b>Instance type</b> : t2.micro	<b>Instance type</b> : t2.micro	<b>Public DNS</b> : ec2-13-126-84-211.ap-south-1.compute.amazonaws.com   <a href="#">open address</a>			
<b>Auto-assigned IP address</b> : 13.126.84.211 [Public IP]	<b>VPC CIDR</b> : vpc-07c85fc60eb43510f	<b>Subnet ID</b> : subnet-0fb4f711dcdf8b1f2	<b>Elastic IP addresses</b> : -			
<b>IAM role</b> : -	<b>Instance ARN</b> : arnaws:ec2:ap-south-1:545492304938:instance/i-06354939680d1d1d8	<b>AWS Compute Optimizer finding</b> : Opt-in to AWS Compute Optimizer for recommendations.   Learn more	<b>Auto Scaling Group name</b> : -			
<b>IMDSv2</b> : Required	<b>Managed</b> : false					
<b>Operator</b> : -						

```
ec2-user@ip-172-31-7-42:~$ mv /mnt/c/Users/<YOUR_WINDOWS_USERNAME>/Downloads/travelmemory-key.pem ~/  
-bash: YOUR_WINDOWS_USERNAME: No such file or directory  
sowjanya@DESKTOP-22FNJHA:~$ mv /mnt/c/Users/sowja/Downloads/travelmemory-key.pem ~/  
sowjanya@DESKTOP-22FNJHA:~$ chmod 400 travelmemory-key.pem  
sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@EC2_PUBLIC_IP  
ssh: Could not resolve hostname ec2_public_ip: Temporary failure in name resolution  
sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211  
The authenticity of host '13.126.84.211 (13.126.84.211)' can't be established.  
ED25519 key fingerprint is SHA256:UugrhBWklthA4uqkIu+msjHyMqLJh8UJmWnXxZbc9PE.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added '13.126.84.211' (ED25519) to the list of known hosts.  
#_  
~\_\_ #####_ Amazon Linux 2023  
~~ \_#####\  
~~ \###|  
~~ \#/ ___ https://aws.amazon.com/linux/amazon-linux-2023  
~~ \~' '--->  
~~ / /  
~~ ._. / /  
~/m/'  
[ec2-user@ip-172-31-7-42 ~]$ |
```

```

(3/7): libunwind-1.4.0-5.amzn2023.0.3.x86_64.rpm
(4/7): nginx-core-1.28.1-1.amzn2023.0.1.x86_64.rpm
(5/7): nginx-1.28.1-1.amzn2023.0.1.x86_64.rpm
(6/7): nginx-filesystem-1.28.1-1.amzn2023.0.1.noarch.rpm
(7/7): nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch.rpm
-----
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 
  Running scriptlet: nginx-filesystem-1:1.28.1-1.amzn2023.0.1.noarch
Installing  : nginx-filesystem-1:1.28.1-1.amzn2023.0.1.noarch
Installing  : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch
Installing  : libunwind-1.4.0-5.amzn2023.0.3.x86_64
Installing  : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64
Installing  : nginx-core-1:1.28.1-1.amzn2023.0.1.x86_64
Installing  : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
Installing  : nginx-1:1.28.1-1.amzn2023.0.1.x86_64
  Running scriptlet: nginx-1:1.28.1-1.amzn2023.0.1.x86_64
Verifying   : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
Verifying   : gperftools-libs-2.9.1-1.amzn2023.0.3.x86_64
Verifying   : libunwind-1.4.0-5.amzn2023.0.3.x86_64
Verifying   : nginx-1:1.28.1-1.amzn2023.0.1.x86_64
Verifying   : nginx-core-1:1.28.1-1.amzn2023.0.1.x86_64
Verifying   : nginx-filesystem-1:1.28.1-1.amzn2023.0.1.noarch
Verifying   : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

Installed:
  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch      gperftools-libs-2.9.1-1.amzn2023.0.3.x
  nginx-1:1.28.1-1.amzn2023.0.1.x86_64                  nginx-core-1:1.28.1-1.amzn2023.0.1.x86
  nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch

Complete!
[ec2-user@ip-172-31-7-42 ~]$ node -v
v18.20.8
[ec2-user@ip-172-31-7-42 ~]$ npm -v
10.8.2
[ec2-user@ip-172-31-7-42 ~]$ |

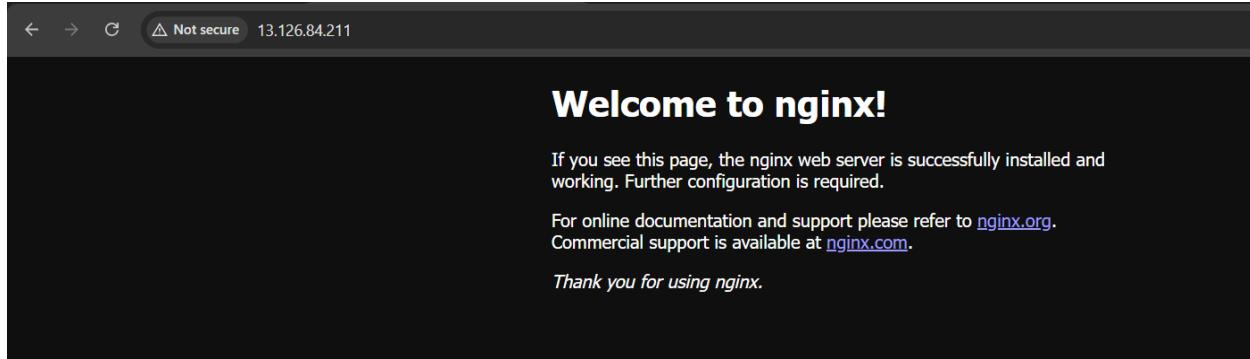
```

```

[ec2-user@ip-172-31-7-42 ~]$ sudo systemctl start nginx
[ec2-user@ip-172-31-7-42 ~]$ sudo systemctl status nginx
● nginx.service - The nginx HTTP and reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: disabled)
   Active: active (running) since Tue 2026-02-10 07:13:15 UTC; 7s ago
     Process: 26440 ExecStartPre=/usr/bin/run -f /run/nginx.pid (code=exited, status=0/SUCCESS)
    Process: 26441 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=0/SUCCESS)
    Process: 26442 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUCCESS)
   Main PID: 26443 (nginx)
      Tasks: 2 (limit: 1120)
        Memory: 2.5M
          CPU: 44ms
        CGroup: /system.slice/nginx.service
            └─26443 "nginx: master process /usr/sbin/nginx"
                ├─26444 "nginx: worker process"

Feb 10 07:13:15 ip-172-31-7-42.ap-south-1.compute.internal systemd[1]: Starting nginx.service - The nginx HTTP and reverse proxy server...
Feb 10 07:13:15 ip-172-31-7-42.ap-south-1.compute.internal nginx[26441]: nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
Feb 10 07:13:15 ip-172-31-7-42.ap-south-1.compute.internal nginx[26441]: nginx: configuration file /etc/nginx/nginx.conf test is successful
Feb 10 07:13:15 ip-172-31-7-42.ap-south-1.compute.internal systemd[1]: Started nginx.service - The nginx HTTP and reverse proxy server.
[ec2-user@ip-172-31-7-42 ~]$ |

```



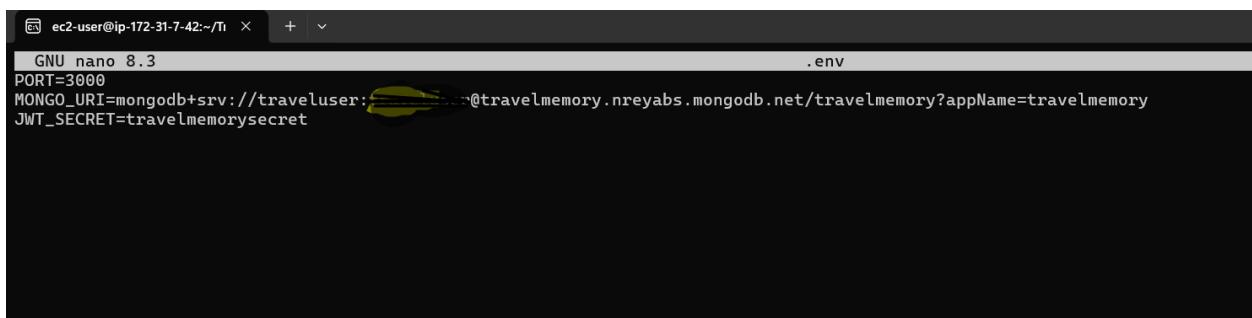
```
Run `npm audit` for details.
npm notice
npm notice New major version of npm available! 10.8.2 -> 11.9.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v11.9.0
npm notice To update run: npm install -g npm@11.9.0
npm notice
[ec2-user@ip-172-31-7-42 backend]$ client_loop: send disconnect: Broken pipe
sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211
      #_
 ~\_\_ #####_          Amazon Linux 2023
 ~~ \_\#####\_
 ~~   \###|
 ~~     \#/ ___ https://aws.amazon.com/linux/amazon-linux-2023
 ~~       \|-' '-->
 ~~~        /
 ~~.._._/
 ~~/_/_/
 _/m/'_
Last login: Tue Feb 10 07:27:12 2026 from 106.192.2.46
[ec2-user@ip-172-31-7-42 ~]$ npm -v
10.8.2
[ec2-user@ip-172-31-7-42 ~]$ client_loop: send disconnect: Broken pipe
sowjanya@DESKTOP-22FNJHA:~$
```

```
sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211
'      #
~\_ #####_          Amazon Linux 2023
~~ \_#####\
~~  \###|
~~   \#/ ___  https://aws.amazon.com/linux/amazon-linux-2023
~~     \~' '-->
~~~      /
~~ ._. _/
~~/_/_/
~/m/'

Last login: Tue Feb 10 07:36:52 2026 from 106.192.2.46
[ec2-user@ip-172-31-7-42 ~]$ cd TravelMemory/backend
[ec2-user@ip-172-31-7-42 backend]$ pwd
/home/ec2-user/TravelMemory/backend
[ec2-user@ip-172-31-7-42 backend]$ |
```

```
sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211
'      #
~\_ #####_          Amazon Linux 2023
~~ \_#####\
~~  \###|
~~   \#/ ___  https://aws.amazon.com/linux/amazon-linux-2023
~~     \~' '-->
~~~      /
~~ ._. _/
~~/_/_/
~/m'

Last login: Tue Feb 10 13:10:15 2026 from 106.192.2.46
[ec2-user@ip-172-31-7-42 ~]$ pwd
/home/ec2-user
[ec2-user@ip-172-31-7-42 ~]$ cd travelmemory/backend
-bash: cd: travelmemory/backend: No such file or directory
[ec2-user@ip-172-31-7-42 ~]$ cd TravelMemory/backend
[ec2-user@ip-172-31-7-42 backend]$ pwd
/home/ec2-user/TravelMemory/backend
[ec2-user@ip-172-31-7-42 backend]$ nano .env
[ec2-user@ip-172-31-7-42 backend]$ nano .env
[ec2-user@ip-172-31-7-42 backend]$ |
```



A screenshot of a terminal window titled "ec2-user@ip-172-31-7-42:~/.env". The window shows the following content:

```
GNU nano 8.3
PORT=3000
MONGO_URI=mongodb+srv://traveluser:[REDACTED]@travelmemory.nreyabs.mongodb.net/travelmemory?appName=travelmemory
JWT_SECRET=travelmemorysecret
```

```
sowjanya@DESKTOP-22FNJHA:~/TravelMemory/backend$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211
Warning: Identity file travelmemory-key.pem not accessible: No such file or directory.
ec2-user@13.126.84.211: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
sowjanya@DESKTOP-22FNJHA:~/TravelMemory/backend$ cd
sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211
#_
~\_ #####_ Amazon Linux 2023
~~ \_\#\#\#\_
~~ \#\#\#
~~ \|/_--> https://aws.amazon.com/linux/amazon-linux-2023
~~ \~,_->
~~ .-/
~~ /-/
~/m', Last login: Tue Feb 10 13:49:09 2026 from 106.192.0.120
[ec2-user@ip-172-31-7-42 ~]$ cd TravelMemory/backend
[ec2-user@ip-172-31-7-42 backend]$ ls routes
trip.routes.js
[ec2-user@ip-172-31-7-42 backend]$ sed -n '1,200p' index.js
const express = require('express')
const cors = require('cors')
require('dotenv').config()

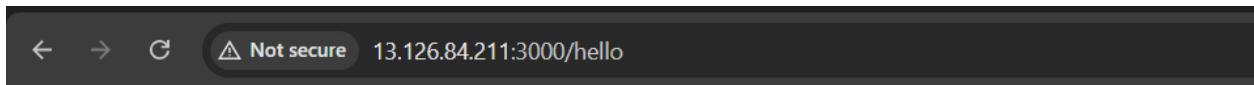
const app = express()
PORT = process.env.PORT
const conn = require('../conn')
app.use(express.json())
app.use(cors())

const tripRoutes = require('../routes/trip.routes')

app.use('/trip', tripRoutes) // http://localhost:3001/trip --> POST/GET/GET by ID

app.get('/hello', (req,res)=>{
  res.send('Hello World!')
})

app.listen(PORT, ()=>{
  console.log(`Server started at http://localhost:${PORT}`)
})[ec2-user@ip-172-31-7-42 backend]$ |
```



Hello World!

```

Runtime Edition

PM2 is a Production Process Manager for Node.js applications
with a built-in Load Balancer.

Start and Daemonize any application:
$ pm2 start app.js

Load Balance 4 instances of api.js:
$ pm2 start api.js -i 4

Monitor in production:
$ pm2 monitor

Make pm2 auto-boot at server restart:
$ pm2 startup

To go further checkout:
http://pm2.io/

-----

[PM2] Spawning PM2 daemon with pm2_home=/home/ec2-user/.pm2
[PM2] PM2 Successfully daemonized
6.0.14
[ec2-user@ip-172-31-7-42 backend]$ pm2 start index.js --name travelmemory-backend
[PM2] Starting /home/ec2-user/TravelMemory/backend/index.js in fork_mode (1 instance)
[PM2] Done.



| id | name                 | namespace | version | mode | pid   | uptime |   | status | cpu | mem    | user     | watching |
|----|----------------------|-----------|---------|------|-------|--------|---|--------|-----|--------|----------|----------|
| 0  | travelmemory-backend | default   | 1.0.0   | Fork | 39192 | 0s     | 0 | online | 0%  | 31.2mb | ec2-user | disabled |



[ec2-user@ip-172-31-7-42 backend]$ pm2 status


| id | name                 | namespace | version | mode | pid | uptime |    | status  | cpu | mem | user     | watching |
|----|----------------------|-----------|---------|------|-----|--------|----|---------|-----|-----|----------|----------|
| 0  | travelmemory-backend | default   | 1.0.0   | Fork | 0   | 0      | 15 | errored | 0%  | 0b  | ec2-user | disabled |



[ec2-user@ip-172-31-7-42 backend]$ |

```

```

[ec2-user@ip-172-31-7-42 backend]$ pm2 logs travelmemory-backend --lines 30
[TAILING] Tailing last 30 lines for [travelmemory-backend] process (change the value with --lines option)
/home/ec2-user/.pm2/logs/travelmemory-backend-out.log last 30 lines:
/home/ec2-user/.pm2/logs/travelmemory-backend-error.log last 30 lines:
0|travelme |     at Function.listen (/home/ec2-user/TravelMemory/backend/node_modules/express/lib/application.js:635:24)
0|travelme |     at Object.<anonymous> (/home/ec2-user/TravelMemory/backend/index.js:19:5)
0|travelme |     at Module._compile (node:internal/modules/cjs/loader:1364:14)
0|travelme |     at Module._extensions..js (node:internal/modules/cjs/loader:1422:10)
0|travelme |     at Module.load (node:internal/modules/cjs/loader:1203:32)
0|travelme |     at Module._load (node:internal/modules/cjs/loader:1019:12)
0|travelme |     at Object.<anonymous> (/usr/lib/node_modules/pm2/lib/ProcessContainerFork.js:33:23) {
0|travelme |       code: 'EADDRINUSE',
0|travelme |       errno: -98,
0|travelme |       syscall: 'listen',
0|travelme |       address: '::',
0|travelme |       port: 3000
0|travelme |     }
0|travelme |     Error: listen EADDRINUSE: address already in use :::3000
0|travelme |     at Server.setupListenHandle [as _listen2] (node:net:1817:16)
0|travelme |     at listenInCluster (node:net:1865:12)
0|travelme |     at Server.listen (node:net:1953:7)
0|travelme |     at Function.listen (/home/ec2-user/TravelMemory/backend/node_modules/express/lib/application.js:635:24)
0|travelme |     at Object.<anonymous> (/home/ec2-user/TravelMemory/backend/index.js:19:5)
0|travelme |     at Module._compile (node:internal/modules/cjs/loader:1364:14)
0|travelme |     at Module._extensions..js (node:internal/modules/cjs/loader:1422:10)
0|travelme |     at Module.load (node:internal/modules/cjs/loader:1203:32)
0|travelme |     at Module._load (node:internal/modules/cjs/loader:1019:12)
0|travelme |     at Object.<anonymous> (/usr/lib/node_modules/pm2/lib/ProcessContainerFork.js:33:23) {
0|travelme |       code: 'EADDRINUSE',
0|travelme |       errno: -98,
0|travelme |       syscall: 'listen',
0|travelme |       address: '::',
0|travelme |       port: 3000
0|travelme |     }

^[[A^C
[ec2-user@ip-172-31-7-42 backend]$ pm2 stop travelmemory-backend

```

```

^[[A^C
[ec2-user@ip-172-31-7-42 backend]$ pm2 stop travelmemory-backend
[PM2] Applying action stopProcessId on app [travlelmemory-backend](ids: [ 0 ])
[PM2] [travlelmemory-backend](0) ✓



| <code>id</code> | <code>name</code>     | <code>namespace</code> | <code>version</code> | <code>mode</code> | <code>pid</code> | <code>uptime</code> | <code>⌚</code> | <code>status</code> | <code>cpu</code> | <code>mem</code> | <code>user</code> | <code>watching</code> |
|-----------------|-----------------------|------------------------|----------------------|-------------------|------------------|---------------------|----------------|---------------------|------------------|------------------|-------------------|-----------------------|
| 0               | travlelmemory-backend | default                | 1.0.0                | fork              | 0                | 0                   | 15             | stopped             | 0%               | 0b               | ec2-user          | disabled              |



[ec2-user@ip-172-31-7-42 backend]$ pm2 delete travelmemory-backend
[PM2] Applying action deleteProcessId on app [travlelmemory-backend](ids: [ 0 ])
[PM2] [travlelmemory-backend](0) ✓



| <code>id</code> | <code>name</code> | <code>namespace</code> | <code>version</code> | <code>mode</code> | <code>pid</code> | <code>uptime</code> | <code>⌚</code> | <code>status</code> | <code>cpu</code> | <code>mem</code> | <code>user</code> | <code>watching</code> |
|-----------------|-------------------|------------------------|----------------------|-------------------|------------------|---------------------|----------------|---------------------|------------------|------------------|-------------------|-----------------------|
|                 |                   |                        |                      |                   |                  |                     |                |                     |                  |                  |                   |                       |



[ec2-user@ip-172-31-7-42 backend]$ pm2 status


| <code>id</code> | <code>name</code> | <code>namespace</code> | <code>version</code> | <code>mode</code> | <code>pid</code> | <code>uptime</code> | <code>⌚</code> | <code>status</code> | <code>cpu</code> | <code>mem</code> | <code>user</code> | <code>watching</code> |
|-----------------|-------------------|------------------------|----------------------|-------------------|------------------|---------------------|----------------|---------------------|------------------|------------------|-------------------|-----------------------|
|                 |                   |                        |                      |                   |                  |                     |                |                     |                  |                  |                   |                       |



[ec2-user@ip-172-31-7-42 backend]$ sudo lsof -i :3000
COMMAND   PID   USER   FD   TYPE DEVICE SIZE/OFF NODE NAME
node    38603 ec2-user  22u  IPv6    73876      0t0  TCP *:hbci (LISTEN)
[ec2-user@ip-172-31-7-42 backend]$ |

```

```
[ec2-user@ip-172-31-7-42 backend]$ sudo lsof -i :3000
COMMAND PID USER FD TYPE DEVICE SIZE/OFF NODE NAME
node 38603 ec2-user 22u IPv6 73876      0t0 TCP *:hbci (LISTEN)
[ec2-user@ip-172-31-7-42 backend]$ sudo kill -9 38603
[ec2-user@ip-172-31-7-42 backend]$ sudo lsof -i :3000
[ec2-user@ip-172-31-7-42 backend]$ pm2 start index.js --name travelmemory-backend
[PM2] Starting /home/ec2-user/TravelMemory/backend/index.js in fork_mode (1 instance)
[PM2] Done.



| id | name                 | namespace | version | mode | pid   | uptime | ○ | status | cpu | mem   | user     | watching |
|----|----------------------|-----------|---------|------|-------|--------|---|--------|-----|-------|----------|----------|
| 0  | travelmemory-backend | default   | 1.0.0   | fork | 39631 | 0s     | 0 | online | 0%  | 8.1mb | ec2-user | disabled |


[ec2-user@ip-172-31-7-42 backend]$ pm2 status


| id | name                 | namespace | version | mode | pid   | uptime | ○ | status | cpu | mem    | user     | watching |
|----|----------------------|-----------|---------|------|-------|--------|---|--------|-----|--------|----------|----------|
| 0  | travelmemory-backend | default   | 1.0.0   | fork | 39631 | 10s    | 0 | online | 0%  | 69.9mb | ec2-user | disabled |


[ec2-user@ip-172-31-7-42 backend]$ |
```

```
[Documentation=https://pm2.keymetrics.io/
After=network.target

[Service]
Type=forking
User=ec2-user
LimitNOFILE=infinity
LimitNPROC=infinity
LimitCORE=infinity
Environment=PATH=/home/ec2-user/.local/bin:/home/ec2-user/bin:/usr/local/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/usr/bin:/bin:/usr/local/sbin:/usr/local/bin
:/usr/sbin:/usr/bin
Environment=PM2_HOME=/home/ec2-user/.pm2
PIDFile=/home/ec2-user/.pm2/pm2.pid
Restart=on-failure

ExecStart=/usr/lib/node_modules/pm2/bin/pm2 resurrect
ExecReload=/usr/lib/node_modules/pm2/bin/pm2 reload all
ExecStop=/usr/lib/node_modules/pm2/bin/pm2 kill

[Install]
WantedBy=multi-user.target

Target path
/etc/systemd/system/pm2-ec2-user.service
Command list
[ 'systemctl enable pm2-ec2-user' ]
[PM2] Writing init configuration in /etc/systemd/system/pm2-ec2-user.service
[PM2] Making script booting at startup...
[PM2] [-] Executing: systemctl enable pm2-ec2-user ...
Created symlink /etc/systemd/system/multi-user.target.wants/pm2-ec2-user.service → /etc/systemd/system/pm2-ec2-user.service.
[PM2] [v] Command successfully executed.
+
[PM2] +-----+
[PM2] Freeze a process list on reboot via:
$ pm2 save

[PM2] Remove init script via:
$ pm2 unstartup systemd
[ec2-user@ip-172-31-7-42 backend]$ pm2 save
[PM2] Saving current process list...
[PM2] Successfully saved in /home/ec2-user/.pm2/dump.pm2
[ec2-user@ip-172-31-7-42 backend]$ |
```

```
GNU nano 8.3                                     /etc/nginx/conf.d/travelmemory.conf

server {
    listen 80;

    location /api/ {
        proxy_pass http://localhost:3000/;
        proxy_http_version 1.1;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
    }
}
```

```

ec2-user@ip-172-31-7-42:~/ | + -
Hello World![ec2-user@ip-172-31-7-42 backend]$ client_loop: send disconnect: Broken pipe
sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211
#_
~\_ #####_      Amazon Linux 2023
~~ \_\#####\
~~ \###|
~~ \#/ ___ https://aws.amazon.com/linux/amazon-linux-2023
~~ \~' '-->
~~ .-. _/
~~ /_/
/_m/
Last login: Tue Feb 10 14:04:42 2026 from 106.192.0.120
[ec2-user@ip-172-31-7-42 ~]$ cd TravelMemory/backend
[ec2-user@ip-172-31-7-42 backend]$ sudo nano /etc/nginx/conf.d/travelmemory.conf
[ec2-user@ip-172-31-7-42 backend]$ sudo nano /etc/nginx/conf.d/travelmemory.conf
[ec2-user@ip-172-31-7-42 backend]$ sudo nano /etc/nginx/conf.d/travelmemory.conf
[ec2-user@ip-172-31-7-42 backend]$ sudo nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
[ec2-user@ip-172-31-7-42 backend]$ sudo systemctl restart nginx
[ec2-user@ip-172-31-7-42 backend]$ sudo systemctl status nginx
● nginx.service - The nginx HTTP and reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: disabled)
   Active: active (running) since Tue 2026-02-10 14:37:22 UTC; 8s ago
     Process: 40258 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
     Process: 40259 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=0/SUCCESS)
     Process: 40260 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUCCESS)
      Main PID: 40261 (nginx)
        Tasks: 2 (limit: 1120)
       Memory: 2.5M
          CPU: 44ms
         CGroup: /system.slice/nginx.service
             ├─40261 "nginx: master process /usr/sbin/nginx"
             └─40262 "nginx: worker process"

Feb 10 14:37:22 ip-172-31-7-42.ap-south-1.compute.internal systemd[1]: Starting nginx.service - The nginx HTTP and reverse proxy server...
Feb 10 14:37:22 ip-172-31-7-42.ap-south-1.compute.internal nginx[40259]: nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
Feb 10 14:37:22 ip-172-31-7-42.ap-south-1.compute.internal nginx[40259]: nginx: configuration file /etc/nginx/nginx.conf test is successful
Feb 10 14:37:22 ip-172-31-7-42.ap-south-1.compute.internal systemd[1]: Started nginx.service - The nginx HTTP and reverse proxy server.
[ec2-user@ip-172-31-7-42 backend]$ 

```

## FRONTEND:

- The frontend application was configured to connect to the deployed backend API.
- A production build of the React application was generated for deployment.
- Nginx was configured to serve the React production build files.
- The frontend application was successfully accessed via the EC2 public IP address.
- Frontend and backend integration was verified through successful API communication.

```

sowjanya@DESKTOP-22FNJHA:~$ ssh -i travelmemory-key.pem ec2-user@13.126.84.211
#_
~\_ #####_      Amazon Linux 2023
~~ \_\#####\
~~ \###|
~~ \#/ ___ https://aws.amazon.com/linux/amazon-linux-2023
~~ \~' '-->
~~ .-. _/
~~ /_/
/_m/
Last login: Tue Feb 10 14:32:52 2026 from 106.192.0.120
[ec2-user@ip-172-31-7-42 ~]$ cd TravelMemory/frontend
[ec2-user@ip-172-31-7-42 frontend]$ pwd
/home/ec2-user/TravelMemory/frontend
[ec2-user@ip-172-31-7-42 frontend]$ ls src
App.css App.js App.test.js components index.css index.js logo.svg reportWebVitals.js setupTests.js url.js
[ec2-user@ip-172-31-7-42 frontend]$ 

```

```
[ec2-user@ip-172-31-7-42:~/Ti] x + | v
GNU nano 8.3 .env
REACT_APP_BACKEND_URL=http://13.126.84.211/api
```

```
babel-preset-react-app is part of the create-react-app project, which
is not maintained anymore. It is thus unlikely that this bug will
ever be fixed. Add "@babel/plugin-proposal-private-property-in-object" to
your devDependencies to work around this error. This will make this message
go away.

Compiled with warnings.

[eslint]
src/App.js
  Line 1:8:  'logo' is defined but never used  no-unused-vars
src/components/pages/AddExperience.js
  Line 27:15:  Expected '===' and instead saw '=='  eqeqeq

Search for the keywords to learn more about each warning.
To ignore, add // eslint-disable-next-line to the line before.

File sizes after gzip:

 79.44 kB  build/static/js/main.e1238472.js
  1.77 kB  build/static/js/787.cda612ba.chunk.js
   538 B    build/static/css/main.073c9b0a.css

The project was built assuming it is hosted at /.
You can control this with the homepage field in your package.json.

The build folder is ready to be deployed.
You may serve it with a static server:

  npm install -g serve
  serve -s build

Find out more about deployment here:

  https://cra.link/deployment

[ec2-user@ip-172-31-7-42 frontend]$ ls
README.md  build  node_modules  package-lock.json  package.json  public  src
[ec2-user@ip-172-31-7-42 frontend]$ |
```

```
[ec2-user@ip-172-31-7-42 frontend]$ sudo rm -rf /usr/share/nginx/html/*
[ec2-user@ip-172-31-7-42 frontend]$ sudo cp -r build/* /usr/share/nginx/html/
[ec2-user@ip-172-31-7-42 frontend]$ sudo systemctl restart nginx
[ec2-user@ip-172-31-7-42 frontend]$ sudo systemctl status nginx
● nginx.service - The nginx HTTP and reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: disabled)
   Active: active (running) since Tue 2026-02-10 15:02:26 UTC; 7s ago
     Process: 41080 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
    Process: 41081 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=0/SUCCESS)
    Process: 41082 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUCCESS)
   Main PID: 41083 (nginx)
      Tasks: 2 (limit: 1120)
        Memory: 3.7M
          CPU: 48ms
        CGroup: /system.slice/nginx.service
                  └─41083 "nginx: master process /usr/sbin/nginx"
                     ├─41084 "nginx: worker process"

Feb 10 15:02:26 ip-172-31-7-42.ap-south-1.compute.internal systemd[1]: Starting nginx.service - The nginx HTTP and reverse proxy server...
Feb 10 15:02:26 ip-172-31-7-42.ap-south-1.compute.internal nginx[41081]: nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
Feb 10 15:02:26 ip-172-31-7-42.ap-south-1.compute.internal nginx[41081]: nginx: configuration file /etc/nginx/nginx.conf test is successful
Feb 10 15:02:26 ip-172-31-7-42.ap-south-1.compute.internal systemd[1]: Started nginx.service - The nginx HTTP and reverse proxy server.
[ec2-user@ip-172-31-7-42 frontend]$ |
```

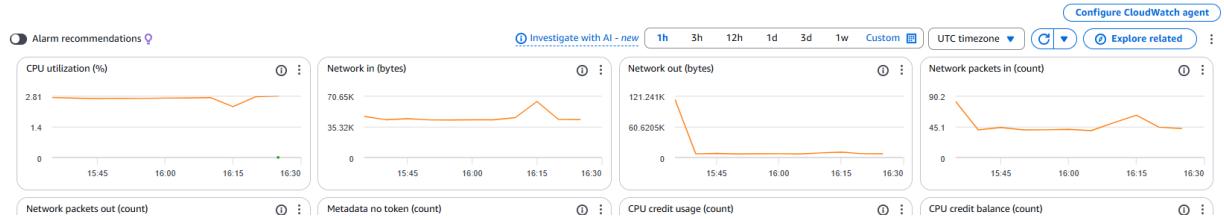
## LOAD BALANCER:

- An Amazon Machine Image (AMI) was created from the configured EC2 instance.
- Multiple EC2 instances were launched from the custom AMI to enable horizontal scaling.
- A Target Group was created and EC2 instances were registered successfully.
- Health checks confirmed that all instances were healthy and ready to receive traffic.
- An Application Load Balancer was configured to distribute incoming requests across instances.
- The application was successfully accessed using the Load Balancer DNS endpoint.

Instances (3/3) Info										
<input type="text" value="Find Instance by attribute or tag (case-sensitive)"/> All states										
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6
travelmemory-ec2	i-06354939680d1d1d8	Running	t2.micro	2/2 checks passed	<a href="#">View alarms +</a>	ap-south-1b	ec2-13-126-84-211.ap...	13.126.84.211	-	-
travelmemory-node-2	i-0c926a955641d71f	Running	t2.micro	Initializing	<a href="#">View alarms +</a>	ap-south-1b	ec2-65-2-4-226.ap-sout...	65.2.4.226	-	-
travelmemory-node-1	i-00a4834c5fab13ce8	Running	t2.micro	2/2 checks passed	<a href="#">View alarms +</a>	ap-south-1b	ec2-3-110-115-36.ap-s...	3.110.115.36	-	-

3 instances selected

#### Monitoring



Instances (3) Info										
<input type="text" value="Find Instance by attribute or tag (case-sensitive)"/> All states										
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6
travelmemory-ec2	i-06354939680d1d1d8	Running	t2.micro	2/2 checks passed	<a href="#">View alarms +</a>	ap-south-1b	ec2-13-126-84-211.ap...	13.126.84.211	-	-
travelmemory-node-2	i-0c926a955641d71f	Running	t2.micro	2/2 checks passed	<a href="#">View alarms +</a>	ap-south-1b	ec2-65-2-4-226.ap-sout...	65.2.4.226	-	-
travelmemory-node-1	i-00a4834c5fab13ce8	Running	t2.micro	2/2 checks passed	<a href="#">View alarms +</a>	ap-south-1b	ec2-3-110-115-36.ap-s...	3.110.115.36	-	-

travelmemory-tg

**Details**  
 arn:aws:elasticloadbalancing:ap-south-1:545492304958:targetgroup/travelmemory-tg/bc16fd0590268eb7

Target type Instance	Protocol : Port HTTP: 80	Protocol version HTTP1	VPC <a href="#">vpc-07c85fc60eb43510f</a>
IP address type IPv4	Load balancer <a href="#">None associated</a>		
2 Total targets	0 Healthy 0 Unhealthy 0 Anomalous	2 Unused	0 Initial 0 Draining

**Distribution of targets by Availability Zone (AZ)**  
 Select values in this table to see corresponding filters applied to the Registered targets table below.

Targets | Monitoring | **Health checks** | Attributes | Tags

**Health check settings**

Protocol HTTP	Path /	Port Traffic port	Healthy threshold 5 consecutive health check successes
Unhealthy threshold 2 consecutive health check failures	Timeout 5 seconds	Interval 30 seconds	Success codes 200

travelmemory-alb

**Successfully created load balancer: travelmemory-alb**  
It might take a few minutes for your load balancer to fully set up and route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.

**Introducing ALB target optimizer**  
Target optimizer lets you enforce a maximum number of requests per target using an ALB-provided agent, improving success rates, latency, and efficiency. [Learn more](#)

### travelmemory-alb

**Details**

Load balancer type Application	Status Provisioning	VPC vpc-07c85fc60eb43510f	Load balancer IP address type IPv4
Scheme Internet-facing	Hosted zone ZP97RAFLXTNZK	Availability Zones <a href="#">subnet-0f84771dcdf8b1f2</a> ap-south-1b (aps1-az3) <a href="#">subnet-006fc00224d1abef</a> ap-south-1a (aps1-az1)	Date created February 10, 2026, 22:22 (UTC+0:30)
Load balancer ARN <a href="#">arn:aws:elasticloadbalancing:ap-south-1:1545492304938:loadbalancer/app/travelmemory-alb/54aff929fe421917</a>	DNS name info <a href="#">travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com</a> (A Record)		

**Listeners and rules** | Network mapping | Resource map | Security | Monitoring | Integrations | Attributes | Capacity | Tags

**Listeners and rules (1) Info**  
A listener checks for connection requests on its configured protocol and port. Traffic received by the listener is routed according to the default action and any additional rules.

Protocol:Port	Default action	Rules	ARN	Security policy	Default SSL/TLS certificate	mTLS	Trust store
<a href="#">HTTP:80</a>	Forward to target group <a href="#">travelmemory-tg</a> 1 (100%) Target group stickiness: Off	<a href="#">1 rule</a>	<a href="#">ARN</a>	Not applicable	Not applicable	Not applicable	Not applicable

[Alt+S] [Alt+5]

Load balancers (1) [What's new?](#)

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

**Create load balancer**

Name	Type	Protocol	IP address type	VPC ID	Availability Zones	Security groups	DNS name
<a href="#">travelmemory-alb</a>	application	HTTP: 80	IPv4	vpc-07c85fc60eb43510f	2 Availability Zones	<a href="#">sg-0f2a71258d0d3bb87</a>	<a href="#">travelmemory-alb-1207660...</a>

age [Alt+S] [Alt+5]

travelmemory-tg

**travelmemory-tg**

**Details**

Target type Instance	Protocol : Port HTTP: 80	Protocol version HTTP1	VPC vpc-07c85fc60eb43510f
IP address type IPv4	Load balancer <a href="#">travelmemory-alb</a>		
2 Total targets	<span style="color: green;">2</span> Healthy	<span style="color: red;">0</span> Unhealthy	<span style="color: grey;">0</span> Unused
	0 Anomalous		<span style="color: grey;">0</span> Initial
			<span style="color: grey;">0</span> Draining

**Distribution of targets by Availability Zone (AZ)**  
Select values in this table to see corresponding filters applied to the Registered targets table below.

**Targets** | Monitoring | Health checks | Attributes | Tags

**Registered targets (2) Info**  
Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

**Anomaly mitigation: Not applicable** [Deregister](#) [Register targets](#)

Instance ID	Name	Port	Zone	Health status	Health status details	Administrative o...	Override details	Launch...	Anomaly c...
<a href="#">i-0c92e6a955641d71f</a>	travelmemory-...	80	ap-south-1b (a...)	<span style="color: green;">Healthy</span>	-	<input checked="" type="radio"/> No override	No override is current...	February ...	<span style="color: green;">Normal</span>
<a href="#">i-00a4834c5fab13ce8</a>	travelmemory-...	80	ap-south-1b (a...)	<span style="color: green;">Healthy</span>	-	<input checked="" type="radio"/> No override	No override is current...	February ...	<span style="color: green;">Normal</span>

**Introducing ALB target optimizer**  
Target optimizer lets you enforce a maximum number of requests per target using an ALB-provided agent, improving success rates, latency, and efficiency. [Learn more](#)

## travelmemory-alb

**Details**

Load balancer type Application	Status <span>Active</span>	VPC <a href="#">vpc-07c85fc60eb43510f</a>	Load balancer IP address type IPv4
Scheme Internet-facing	Hosted zone ZP97RAFLXTNZK	Availability Zones <a href="#">subnet-0fb4f711dcdf8b1f2</a> ap-south-1b (aps1-az3) <a href="#">subnet-006fc00224d41abef</a> ap-south-1a (aps1-az1)	Date created February 10, 2026, 22:22 (UTC+05:30)
Load balancer ARN <a href="#">arn:aws:elasticloadbalancing:ap-south-1:545492304938:loadbalancer/app/travelmemory-alb/54aff929fe421917</a>		DNS name Info <a href="#">travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com</a> (A Record)	

Listeners and rules | Network mapping | Resource map | **Security** | Monitoring | Integrations | Attributes | Capacity | Tags

### Security groups (1)

A security group is a set of firewall rules that control the traffic to your load balancer.

Security Group ID	Name	Description
<a href="#">sg-0f2a71258d0d3b871</a>	default	default VPC security group

[Edit](#)

travelmemory-alb-1207660565 [+](#)

→ [travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com](#)



**This site can't be reached**

[travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com](#) took too long to respond.

Try:

- Checking the connection
- Checking the proxy and the firewall

ERR\_CONNECTION\_TIMED\_OUT

[Reload](#) [Details](#)

The screenshot shows a success message: "Inbound security group rules successfully modified on security group (sg-0f2a71258d0d3b871 | default)". Below it, the security group details are listed:

- Security group name:** sg-0f2a71258d0d3b871 - default
- Security group ID:** sg-0f2a71258d0d3b871
- Description:** default VPC security group
- VPC ID:** vpc-07c85fc60eb45510f
- Owner:** Sowjanya (5454-9230-4938)
- Inbound rules count:** 3 Permission entries
- Outbound rules count:** 1 Permission entry

Below the details, there are tabs for Inbound rules, Outbound rules, Sharing, VPC associations, Related resources - new, and Tags. The Inbound rules section shows three entries:

Name	Security group rule ID	IP version	Type	Protocol	Port range	Source	Description
-	sgr-016c39afcfc5fd3547	IPv4	HTTP	TCP	80	0.0.0.0/0	-
-	sgr-096294d570b7d960d	IPv4	Custom TCP	TCP	3000	0.0.0.0/0	-
-	sgr-06984dd3a4313cb12	IPv4	SSH	TCP	22	0.0.0.0/0	-

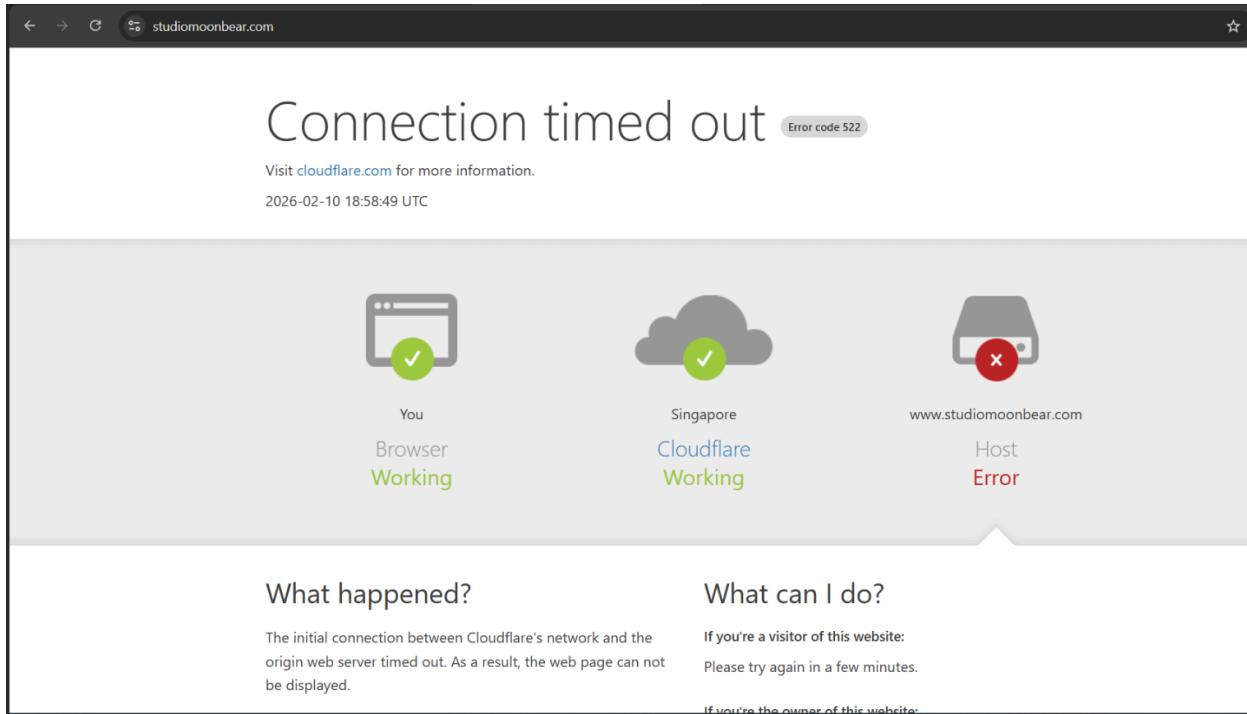
The browser window shows the URL [travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com](http://travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com). The page content includes "Travel Memory" and "Add Experience".

## Cloudflare and Domain Configuration:

Mydomain: [studiomoonbear.com](https://studiomoonbear.com)

Loadbalancer: <http://travelmemory-alb-1207660565.ap-south-1.elb.amazonaws.com/>

- The custom domain was added to Cloudflare for DNS management.
- Nameservers were updated at the domain registrar to point to Cloudflare.
- A CNAME record was configured to route the www subdomain to the Load Balancer.
- An A record was configured to map the root domain to the EC2 public IP address.
- DNS propagation was verified and the application was successfully accessed via the custom domain.



This screenshot shows the Cloudflare DNS Records management interface for the domain `studiomoonbear.com`. The left sidebar includes sections like Overview, Recents, AI Crawl Control, Log Explorer, Analytics & logs, DNS (selected), Records, Analytics, Settings, Email, SSL/TLS, Security, Access, Speed, Caching, Workers Routes, and Rules. The main area is titled "DNS Records" and contains a table of DNS records. The table has columns: Type, Name, Content, Proxy status, TTL, and Actions. Several records are highlighted with red boxes: an A record for `studiomoonbear.com`, two CNAME records for `_domainconnect` and `email`, and a CNAME record for `www`. The "Actions" column for these records includes "Edit" links. At the top of the table, there are filters ("Add filter") and search ("Search") buttons. The top right of the interface shows "DNS Setup: Full", "Import and Export", and "Dashboard Display Settings". A note at the top states: "studiomoonbear.com is pending until you complete the instructions on the Overview page and we are able to verify ownership. Learn more about pending domains.".

studiomoonbear.com

Domain Settings Select a different domain

DNS Records Forwarding Nameservers Premium DNS Hostnames DNSSEC Crypto Wallet

Nameservers determine where your DNS is hosted and where you add, edit or delete your DNS records.

Using custom nameservers Change Nameservers

Nameservers ?

johnny.ns.cloudflare.com

olivia.ns.cloudflare.com

The screenshot shows a browser window with the following details:

- Tab title: React App
- Address bar: studiomoonbear.com
- Status bar: Not secure

The page content includes:

- Travel Memory
- Add Experience