



So cat → Command line utility
↓
Socket CAT.
↳ Versatile tool for establishing
bidirection data transfer b/w
two network connects.

Technique 4: To Monitor traffic

Using Socat to monitor Docker API Traffic

Problem

To monitor traffic

Step 1 → Run Socket using

```
Socat -v UNIX-LISTEN:/tmp/  
dockerapi.sock, fork | UNIX-  
CONNECT:/var/run/docker.sock &
```

Step 2 → To see request & response

```
docker -H unix:///tmp/dockerapi.sock ps -a
```

↓
stands for Application
Programming Interface.
It is a set of
rule & protocols
that allows different
Software application
to communicate &
Interact with
each other

→ observing & capturing the
interactions between
docker client &
docker daemon.
Monitoring Docker API traffic involves capturing
and analysing the communication between
the Docker client and the Docker daemon.

Docker provides a RESTful API that allows
user to interact with the docker daemon
programmatically, making it possible to manage
containers, images, networks, and other
Docker resources.


```
$ socat -V UNIX-LISTEN:/tmp/dockerapi.sock,fork\
UNIX-CONNECT:/var/run/docker.sock
```

↓
→ When you run this command socat will start listening on the custom UNIX socket /tmp/dockerapi.sock. Any Incoming Connections to this socket will be forked ^{stop} socket will create a new process to handle each connection. It will then connect to the original docker daemon socket at /var/run/docker.sock

→ The -v option enables verbose output, so you should see log messages indicating the data flow and connection being established.

```
$ docker -H unix:///tmp/dockerapi.sock ps -a
```

After running the socat command in step 1, you can use this command to interact with the docker daemon

1) docker → This is the Docker Command-Line Interface (CLI) used to interact with Docker and Manages. Containers, images, network etc.

2) -H unix:///tmp/dockerapi.sock: The -H flag Specifies the Docker Daemon host or endpoint. In this case It is set to unix:///tmp/dockerapi.sock, Indicating that we want to connect docker daemon through the custom UNIX Socket /tmp/dockerapi.sock. The docker client will send its api requests to this custom Socket, which is being handle by socat process created in - Step 1

3) ps: process status → list out running Containers

4) -a: The -a flag, Instruct Docker to Show all Containers.