

09-docker-proxy.md

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Socket Proxy tags: [dockerproxy,
security, docker, infrastructure]

Overview

The Docker Socket Proxy (`dockerproxy`) provides a read-only, filtered proxy to the Docker daemon socket. It exposes a limited subset of the Docker API over TCP, allowing containers like Homepage to query running container data without requiring direct access to `/var/run/docker.sock`. No Traefik route — internal use only.

Configuration

Image: `tecnativa/docker-socket-proxy`

Environment Variables (API Permission Flags)

Variable	Value	Permission granted
<code>CONTAINERS</code>	<code>1</code>	Read container list and inspect data
<code>EVENTS</code>	<code>1</code>	Subscribe to Docker events stream
<code>POST</code>	<code>0</code>	Disabled — no write operations

Variable	Value	Permission granted
ALLOW_START	0	Cannot start containers
ALLOW_STOP	0	Cannot stop containers
ALLOW_RESTARTS	0	Cannot restart containers
AUTH	0	No auth endpoint access
BUILD	0	No build operations
COMMIT	0	No commit operations
CONFIGS	0	No config access
DISTRIBUTION	0	No distribution endpoint access

All write operations are disabled. The proxy grants read-only container metadata access only.

Volumes / Bind Mounts

Host Path	Container Path	Purpose
/var/run/docker.sock	/var/run/docker.sock	Docker socket (read-only proxy source)

Consumer

The primary consumer is **Homepage** (`homepage.home.local`), which connects to `dockerproxy:2375` to discover running containers and display live service status widgets. This avoids mounting the Docker socket directly into Homepage.

Notes / Gotchas

- The proxy listens on TCP port 2375 (standard Docker API port) inside the Docker network — it is not exposed on any host port or Traefik route.
 - Allowing only `CONTAINERS=1` and `EVENTS=1` means Homepage can list containers and receive real-time status events, but cannot perform any management actions.
 - If Homepage shows containers as offline or fails to discover services, verify `dockerproxy` is running and on the same Docker network as Homepage.
 - The `tecnativa/docker-socket-proxy` image is the community standard for this pattern. It is based on HAProxy 3.x and routes allowed API paths only.
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