Module-1: The Docker Engine

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DEMO-1: Setting Logging Drivers for Docker

Configuring Journald for logging containers
Note: All commands are executed as root.

1. To set journald as your default logging driver create daemon.json file inside /etc/docker/ directory if it does not already exist

```
$ vi /etc/docker/daemon.json
```

2. Add the following to the daemon.json file

```
{
        "log-driver": "journald"
}
```

Other log options can also be added such as labels, environment variables and more

```
{
     "log-driver": "journald"
     "log-opts":{
          "labels": "origin"
          "env": "test"
     }
     "labels":{
          "origin": "west"
     }
     "env": {
          "test": "true"
     }
}
```

3. Restart the docker service for the changes to take effect

```
$ systemctl restart docker.service
```

4. To check the configured logging driver run:

```
$ docker info --format '{{.LoggingDriver}}'
```

5. To run a new container with the journald logging driver (in this example we'll run the nginx container)

```
$ docker run -d --log-driver=journald nginx

# to check the running container id and name

$ docker ps
```

```
root@docker-1:/# docker run -d --log-driver=journald nginx
4ed115871ad9eba1d767d7c5f31a7e8cf8bfed6235420c1c8bda88eb08d3767d
root@docker-1:/# docker ps
CONTAINER ID        IMAGE          COMMAND               CREATED         STATUS          PORTS
    NAMES
4ed115871ad9         nginx          "/docker-entrypoint.…"  4 seconds ago   Up 2 seconds    80/tcp
    boring_hypatia
```

6. Now, to check the container logs we can either use CONTAINER_ID or CONTAINER_NAME with the journalctl command

```
$ journalctl CONTAINER_ID=<containerID>
```

```
root@docker-1:/# journalctl CONTAINER_ID=4ed115871ad9
-- Logs begin at Sun 2020-06-21 21:43:46 UTC, end at Mon 2020-06-22 21:42:20 UTC. --
Jun 22 21:39:20 docker-1 4ed115871ad9[4135]: /docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to
Jun 22 21:39:20 docker-1 4ed115871ad9[4135]: /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
Jun 22 21:39:20 docker-1 4ed115871ad9[4135]: /docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-
Jun 22 21:39:20 docker-1 4ed115871ad9[4135]: 10-listen-on-ipv6-by-default.sh: Getting the checksum of /etc/nginx/conf.d/
Jun 22 21:39:20 docker-1 4ed115871ad9[4135]: 10-listen-on-ipv6-by-default.sh: Enabled listen on IPv6 in /etc/nginx/conf.
Jun 22 21:39:20 docker-1 4ed115871ad9[4135]: /docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templa
Jun 22 21:39:20 docker-1 4ed115871ad9[4135]: /docker-entrypoint.sh: Configuration complete; ready for start up
```