

README

Todd Wintermute

2023-10-27

Contents

1	toddwint/dns	1
1.1	Info	1
1.2	Overview	1
1.3	Features	1
1.4	Sample commands to create the <code>macvlan</code>	2
1.5	Sample <code>docker run</code> command	2
1.6	Sample <code>docker compose</code> (<code>compose.yaml</code>) file	3

1 toddwint/dns

1.1 Info

`dns` docker image for simple lab testing applications.

Docker Hub: <https://hub.docker.com/r/toddwint/dns>

GitHub: <https://github.com/toddwint/dns>

1.2 Overview

Docker image for a quick lightweight caching dns server.

Pull the docker image from Docker Hub or, optionally, build the docker image from the source files in the `build` directory.

Create and run the container using `docker run` commands, `docker compose` commands, or by downloading and using the files here on github in the directories `run` or `compose`.

NOTE: A volume named `upload` is created the first time the container is started. Modify the file in that directory. Specify IP and HOSTNAME information in `hosts.csv`. Then restart the container.

Manage the container using a web browser. Navigate to the IP address of the container and one of the HTTPPORTs.

NOTE: Network interface must be UP i.e. a cable plugged in.

Example `docker run` and `docker compose` commands as well as sample commands to create the `macvlan` are below.

1.3 Features

- Ubuntu base image
- Plus:
 - dnsmasq
 - tmux
 - python3-minimal
 - iproute2
 - iputils-ping
 - tzdata

- `ttyd`
 - ◊ View the terminal in your browser
- `frontail`
 - ◊ View logs in your browser
 - ◊ Mark/Highlight logs
 - ◊ Pause logs
 - ◊ Filter logs
- `tailon`
 - ◊ View multiple logs and files in your browser
 - ◊ User selectable `tail`, `grep`, `sed`, and `awk` commands
 - ◊ Filter logs and files
 - ◊ Download logs to your computer

1.4 Sample commands to create the macvlan

Create the docker macvlan interface.

```
docker network create -d macvlan --subnet=192.168.10.0/24 --gateway=192.168.10.254 \
  --aux-address="mgmt_ip=192.168.10.2" -o parent="eth0" \
  --attachable "eth0-macvlan"
```

Create a management macvlan interface.

```
sudo ip link add "eth0-macvlan" link "eth0" type macvlan mode bridge
sudo ip link set "eth0-macvlan" up
```

Assign an IP on the management macvlan interface plus add routes to the docker container.

```
sudo ip addr add "192.168.10.2/32" dev "eth0-macvlan"
sudo ip route add "192.168.10.0/24" dev "eth0-macvlan"
```

1.5 Sample docker run command

```
docker run -dit \
  --name "dns01" \
  --network "eth0-macvlan" \
  --ip "192.168.10.1" \
  -h "dns01" \
  -v "${PWD}/upload:/opt/dns/upload" \
  -p "192.168.10.1:8080:8080" \
  -p "192.168.10.1:8081:8081" \
  -p "192.168.10.1:8082:8082" \
  -p "192.168.10.1:8083:8083" \
  -e TZ="UTC" \
  -e MGMTIP="192.168.10.2" \
  -e GATEWAY="192.168.10.254" \
  -e HUID="1000" \
  -e HGID="1000" \
  -e HTTPPORT1="8080" \
  -e HTTPPORT2="8081" \
  -e HTTPPORT3="8082" \
  -e HTTPPORT4="8083" \
  -e HOSTNAME="dns01" \
  -e APPNAME="dns" \
  "toddwint/dns"
```

1.6 Sample docker compose (compose.yaml) file

```
name: dns01

services:
  dns:
    image: toddwint/dns
    hostname: dns01
    ports:
      - "192.168.10.1:8080:8080"
      - "192.168.10.1:8081:8081"
      - "192.168.10.1:8082:8082"
      - "192.168.10.1:8083:8083"
    networks:
      default:
        ipv4_address: 192.168.10.1
    environment:
      - MGMTIP=192.168.10.2
      - GATEWAY=192.168.10.254
      - HUID=1000
      - HGID=1000
      - HOSTNAME=dns01
      - TZ=UTC
      - HTTPPORT1=8080
      - HTTPPORT2=8081
      - HTTPPORT3=8082
      - HTTPPORT4=8083
      - APPNAME=dns
    volumes:
      - "${PWD}/upload:/opt/dns/upload"
    tty: true

networks:
  default:
    name: "eth0-macvlan"
    external: true
```