

README

Todd Wintermute

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1 toddwint/ztp

1.1 Info

ZTP (Zero-Touch Provisioning) docker image for Juniper SRX345, SRX1500, ACX7024, EX2300, EX4100, and HPE Aruba 2930F devices.

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

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

For more detailed information, please view the ZTP Instructions files: `ZTP Instructions.md`, `ZTP Instructions.html`, or `ZTP Instructions.pdf`.

1.2 Overview

Docker image for performing Zero-Touch Provisioning of network devices.

- Supports the following devices:
 - Juniper SRX345
 - Juniper SRX1500
 - Juniper ACX7024
 - Juniper EX2300
 - Juniper EX4100
 - HPE Aruba 2930F

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 `ftp` is created the first time the container is started and contains default files. Modify these files with your information and 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:
 - rsyslog
 - isc-dhcp-server
 - ftp
 - vsftpd
 - tftp-hpa
 - tftpd-hpa
 - webfs
 - bsdmainutils
 - fzf
 - tmux
 - python3-minimal
 - iputils-ping
 - iproute2
 - tzdata
 - `tttyd`
 - ◊ 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=172.21.0.0/16 --gateway=172.21.255.254 \
    --aux-address="mgmt_ip=172.21.255.253" -o parent="eth0" \
    --attachable "ztp01"
```

Create a management macvlan interface.

```
sudo ip link add "ztp01" link "eth0" type macvlan mode bridge
sudo ip link set "ztp01" up
```

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

```
sudo ip addr add "172.21.255.253/32" dev "ztp01"
sudo ip route add "172.21.0.0/16" dev "ztp01"
```

1.5 Sample docker run command

```
docker run -dit \
    --name "ztp01" \
    --network "ztp01" \
    --ip "172.21.255.252" \
    -h "ztp01" \
    -v "${PWD}/ftp:/opt/ztp/ftp" \
    -e TZ="UTC" \
    -e MGMTIP="172.21.255.253" \
```

```

-e GATEWAY="172.21.255.254" \
-e HUID="1000" \
-e HGID="1000" \
-e HTTPPORT1="8080" \
-e HTTPPORT2="8081" \
-e HTTPPORT3="8082" \
-e HTTPPORT4="8083" \
-e HOSTNAME="ztp01" \
-e APPNAME="ztp" \
"toddwint/ztp"

```

1.6 Sample docker compose (compose.yaml) file

```

name: ztp01

services:
  ztp:
    image: toddwint/ztp
    hostname: ztp01
    ports:
      - "172.21.255.252:8080:8080"
      - "172.21.255.252:8081:8081"
      - "172.21.255.252:8082:8082"
      - "172.21.255.252:8083:8083"
    networks:
      default:
        ipv4_address: 172.21.255.252
    environment:
      - HUID=1000
      - HGID=1000
      - HOSTNAME=ztp01
      - TZ=UTC
      - MGMTIP=172.21.255.253
      - GATEWAY=172.21.255.254
      - HTTPPORT1=8080
      - HTTPPORT2=8081
      - HTTPPORT3=8082
      - HTTPPORT4=8083
    privileged: true
    cap_add:
      - NET_ADMIN
    volumes:
      - "${PWD}/ftp:/opt/ztp/ftp"
    tty: true

networks:
  default:
    name: "ztp01"
    external: true

```