

# README

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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:
  - bsdmainutils
  - ftp
  - fzf
  - iproute2
  - iputils-ping
  - isc-dhcp-server
  - python3-minimal
  - rsyslog
  - tftp-hpa
  - tftpd-hpa
  - tmux
  - tzdata
  - vsftpd
  - webfs
  - [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=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
```