

## Netbox Introduction

(For Challenge 5 see Jira at: <http://nacka.atlassian.net>)

NetBox was built specifically to serve the needs of network engineers and operators.

Wikipedia uses NetBox as the data center infrastructure management (DCIM) and internet protocol address management (IPAM) tool.

"In minutes, we can create a report to tell us which devices or circuits are expiring in this quarter and that we need to renew them," he said.

"The software can show the devices that require upgrades and then update the database automatically."

"And now the inventory is aware of the new version you're running,"

## Netbox

- Replicate the Real World in detail.
- **Source of Truth:** NetBox intends to represent the desired state of a network versus its operational state. No automated import.
- **Keep it Simple:** Low learning curve.

## Key Features

- IP address management (IPAM) with full IPv4/IPv6 parity
- Automatic provisioning of next available prefix/IP
- Virtual Route and Forwarding (VRFs)  
See: <https://ipwithease.com/vrf-basics/>
- VLANs with variably-scoped groups AS number (ASN) management:  
See <https://residentialip.net/network-asn-the-basics/>
- Device modeling using pre-defined types
- Network, power, and console cabling with SVG traces
- Power distribution modeling
- Wireless LAN and point-to-point links
- Application service bindings
- Virtual machines & clusters

- and more ...  
<https://docs.netbox.dev/en/stable/introduction/#key-features>

## What NetBox Is Not!

- Network monitoring
- A DNS server
- A RADIUS server  
(Remote Authentication Dial-In User Service )
- A Configuration management
- A Facilities management

## Configuration

The configuration file is at:

`/opt/netbox/netbox/netbox/configuration.py`

After each modifications in the configuration file you have to restart netbox

`sudo systemctl restart netbox`

## Host configuration

If you know the domain and host of the Netbox:

```
ALLOWED_HOSTS = ['netbox.example.com', '192.0.2.123']
```

Otherwise:

```
ALLOWED_HOSTS = ['*']
```

## Database configuration

```
DATABASE = {  
    'NAME': 'netbox',          # Database name  
    'USER': 'netbox',         # PostgreSQL username  
    'PASSWORD': 'J5brHrAXFLQSif0K', # PostgreSQL password  
    'HOST': 'localhost',      # Database server  
    'PORT': '',               # Database port (leave blank for default)  
    'CONN_MAX_AGE': 300,      # Max database connection age  
}
```



## Exercises

Use Netbox to solve Susan and Eric challenge at:

<https://zerotohero.netbox.dev/>