

Managing Linux Network Configuration



Andrew Mallett

LINUX AUTHOR AND TRAINER

@theurbanpenguin www.theurbanpenguin.com



Overview



Using the ip Command

Networking Linux

- RHEL (Alma): NetworkManager
- openSUSE: Wicked
- Ubuntu: Netplan

Host Name Resolution

- dig
- /etc/nsswitch.conf
- DNS Entries

Monitor Network Traffic



Networking Non-Standards

Alma (RHEL)

NetworkManager

openSUSE

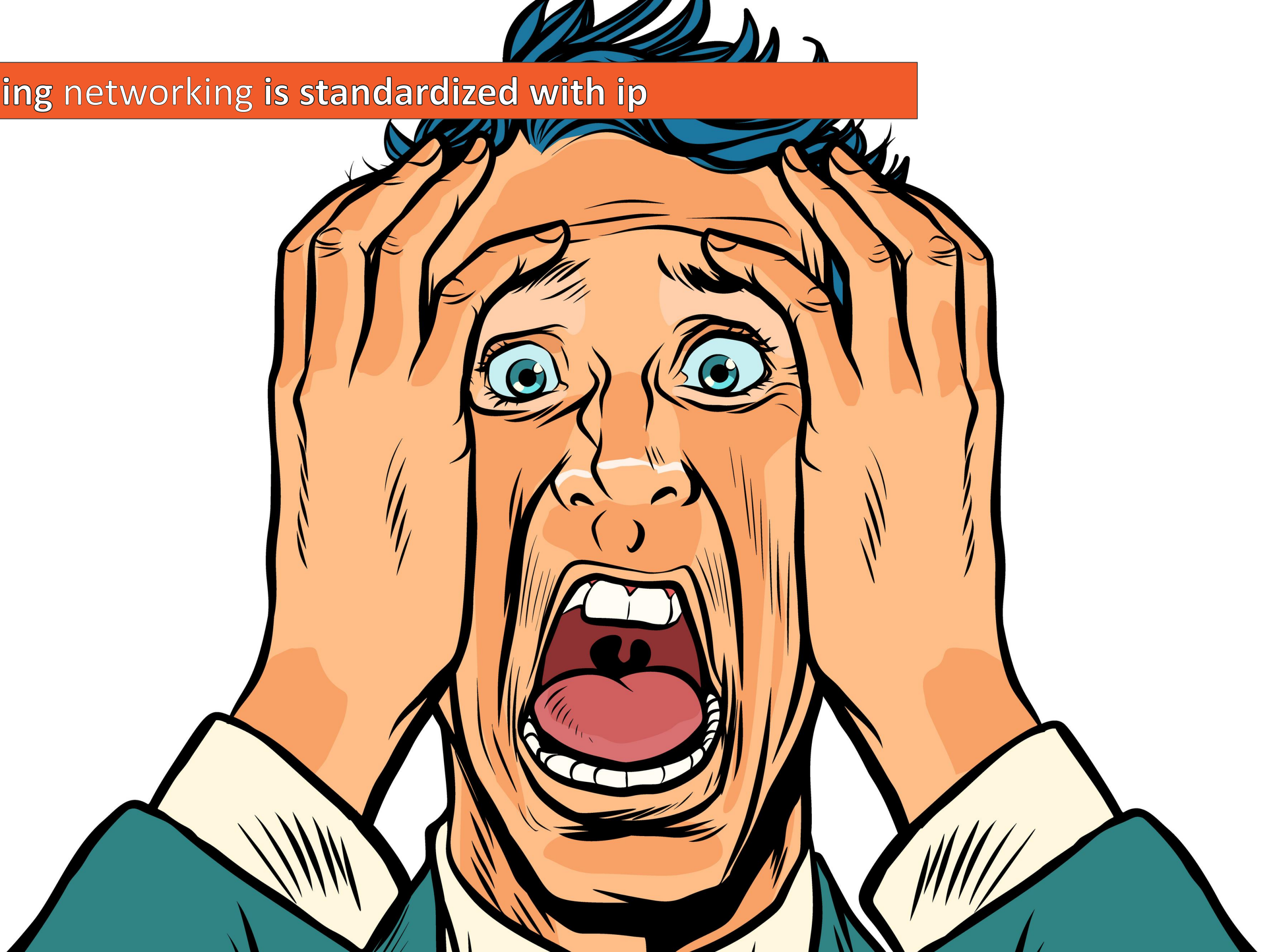
Wicked

Ubuntu 20.04

Netplan



at least reading networking is standardized with ip



Demo



Working on the openSUSE and Alma

- We investigate using the command **ip**



openSUSE

wicked

```
# systemctl status network
```

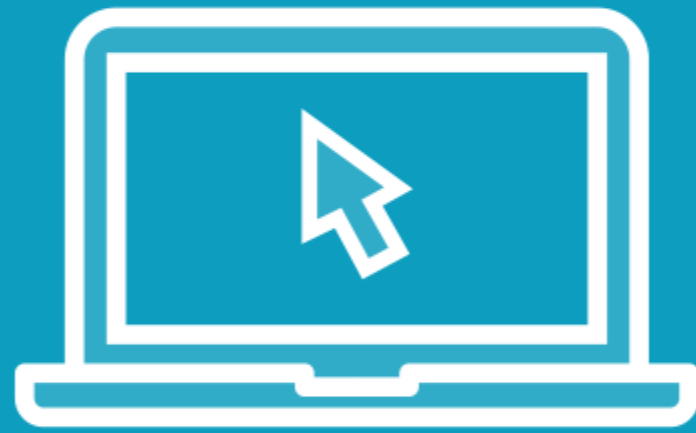
```
# wicked show all
```

```
# wicked show eth1
```

```
# wicked ifdown eth1
```

```
# wicked ifup eth1
```

Demo



Working on the openSUSE
- We investigate **wicked**



Ubuntu 20.04

netplan

```
# ls /etc/netplan/  
# netplan ip leases enp0s3  
# vim /etc/netplan/50-vagrant.yaml  
# netplan try  
# netplan apply
```


Demo



Working on the Ubuntu

- We investigate **netplan**



Alma Linux 8

NetworkManager

```
# nmcli connection show
```

```
# cat /etc/sysconfig/network-scripts/ifcfg-enp0s8
```

```
# nmcli connection modify System\ enp0s8  
ipv4.addresses 192.168.33.11/24,172.16.1.2/16
```

```
# cat /etc/sysconfig/network-scripts/ifcfg-enp0s8
```

Demo



Working on the Alma Linux 8 System

- We investigate **NetworkManager**



Host Name Resolution

`/etc/hosts`

DNS



Host Name Resolution

DNS

/etc/hosts



Demo



Working on the openSUSE

We investigate

- Name resolution
- `/etc/nsswitch.conf`



```
# zypper | apt | yum install bind-utils  
# dig www.pluralsight.com  
# dig www.pluralsight.com @8.8.8.8
```

Checking DNS Entries

The command dig can be installed to help you diagnose DNS issues.

Demo



Working with openSUSE

- Install dig
- Check DNS Entries



Demo



Working with openSUSE

- Control DNS Name Server Entries



Summary



Using the ip command

- ip a
- ip r
- ip n

Persisting Configuration

- netplan
- wicked
- NetworkManager

DNS

- /etc/nsswitch.conf
- dig
- nameservers



Managing Software on Linux Systems

