

An abstract graphic on the left side of the image, composed of numerous thin, wavy green lines that swirl and overlap to form a complex, organic shape. The lines are a vibrant green color against the dark blue background.

# Open. Together.



**OCP**  
SUMMIT



# Zero Touch Network Deployment

Networking  
Software

[Alex Saroyan, CEO, XCloud Networks]

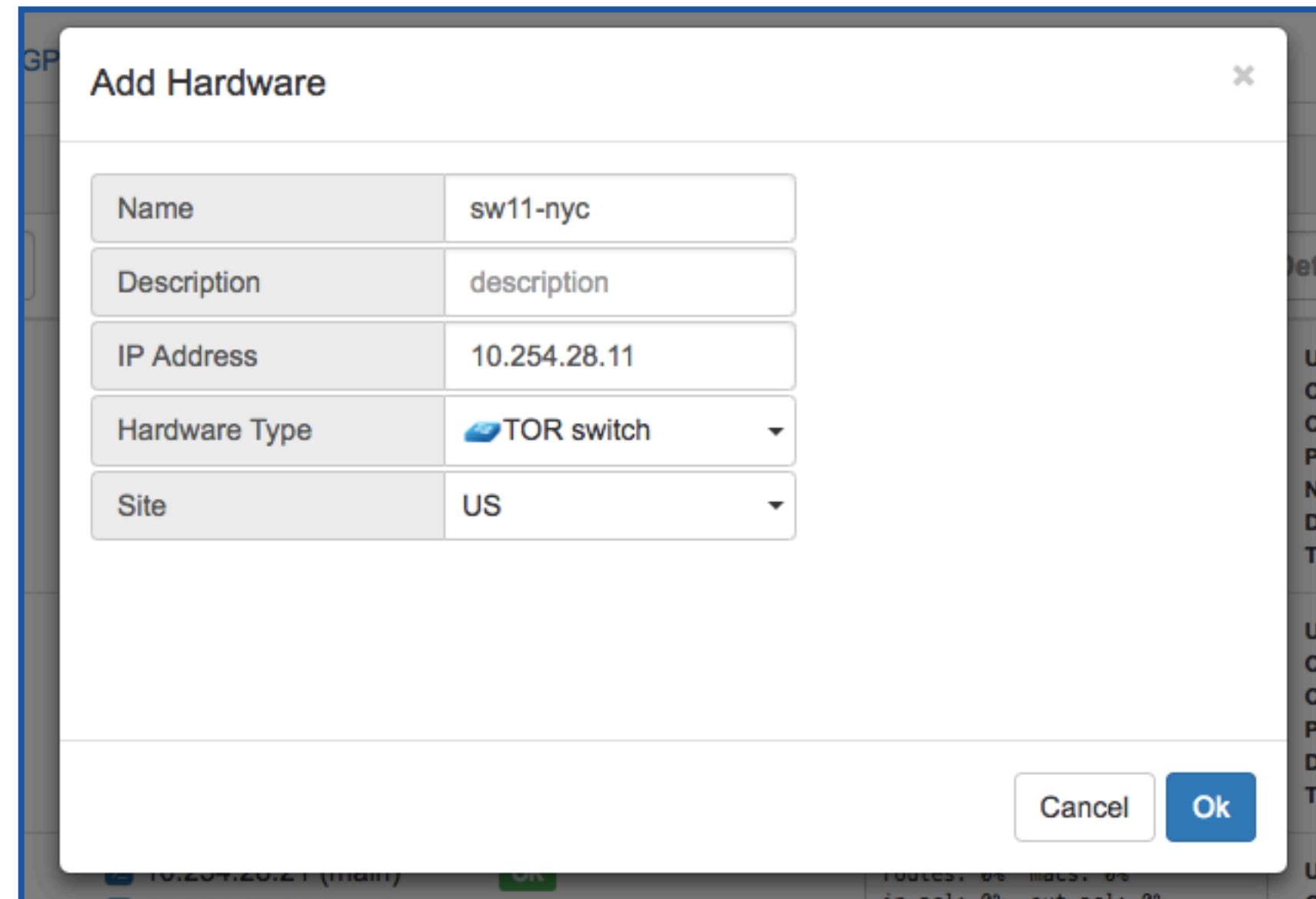


**OPEN**  
COMMUNITY®



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# Step 1) Dashboard configuration



**Add Hardware**

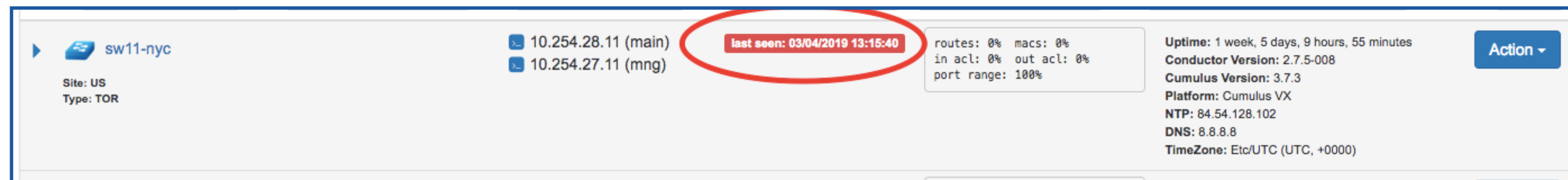
Name	sw11-nyc
Description	description
IP Address	10.254.28.11
Hardware Type	TOR switch
Site	US

Cancel Ok

**A) Define the switch**

**B) Assign an IP address**

**C) Attach Cumulus License key**



**sw11-nyc**  
Site: US  
Type: TOR

10.254.28.11 (main)  
10.254.27.11 (mng)

**last seen: 03/04/2019 13:15:40**

routes: 0% macs: 0%  
in acl: 0% out acl: 0%  
port range: 100%

Uptime: 1 week, 5 days, 9 hours, 55 minutes  
Conductor Version: 2.7.5-008  
Cumulus Version: 3.7.3  
Platform: Cumulus VX  
NTP: 84.54.128.102  
DNS: 8.8.8.8  
TimeZone: Etc/UTC (UTC, +0000)

Action

# Step 2) Automating installation of the NOS

## ZTP

Install dhcp server

```
sudo apt-get install isc-dhcp-server
```

configure dhcp server and define dhcp options in /etc/dhcp/dhcpd.conf

```
option cumulus-provision-url code 239 = text;  
option default-url code 114 = string;  
subnet 10.254.128.0 netmask 255.255.255.0 {  
    range 10.254.128.100 10.254.128.200;  
    option routers 10.254.128.1;  
    option default-url = "http://10.254.128.31/onie-installer";  
    option cumulus-provision-url = "http://10.254.128.32/provision.sh";  
}
```

**cumulus-provision-url** - is a path for script

**default-url** - is a path for NOS image

include the following line in any of the supported scripts that you expect to run using the autoprovisioning framework.

```
# CUMULUS-AUTOPROVISIONING
```

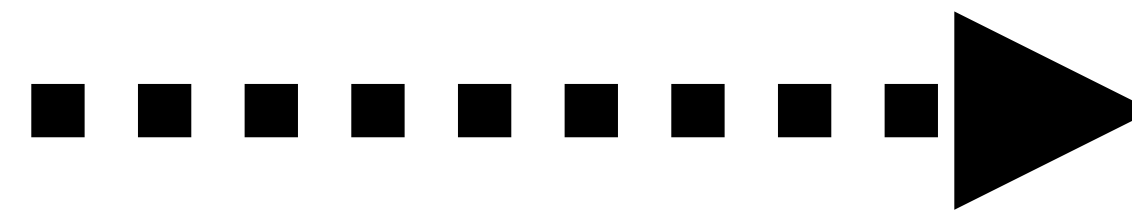
## A) ISC DHCP Server

## B) NOS image URL

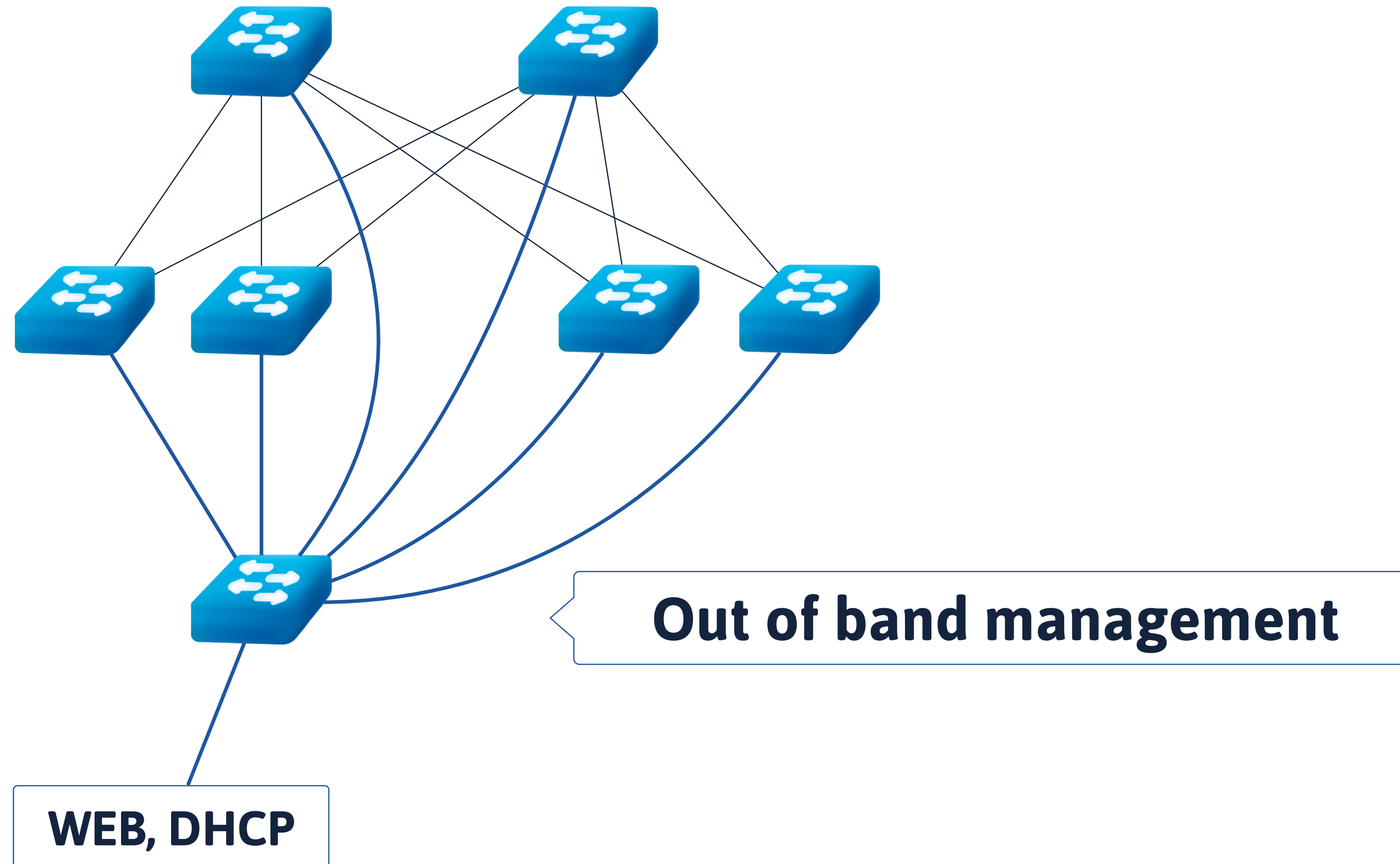
## C) Post install script

## Step 2) Automating installation of the NOS

# LIVE INSTALLATION DEMO



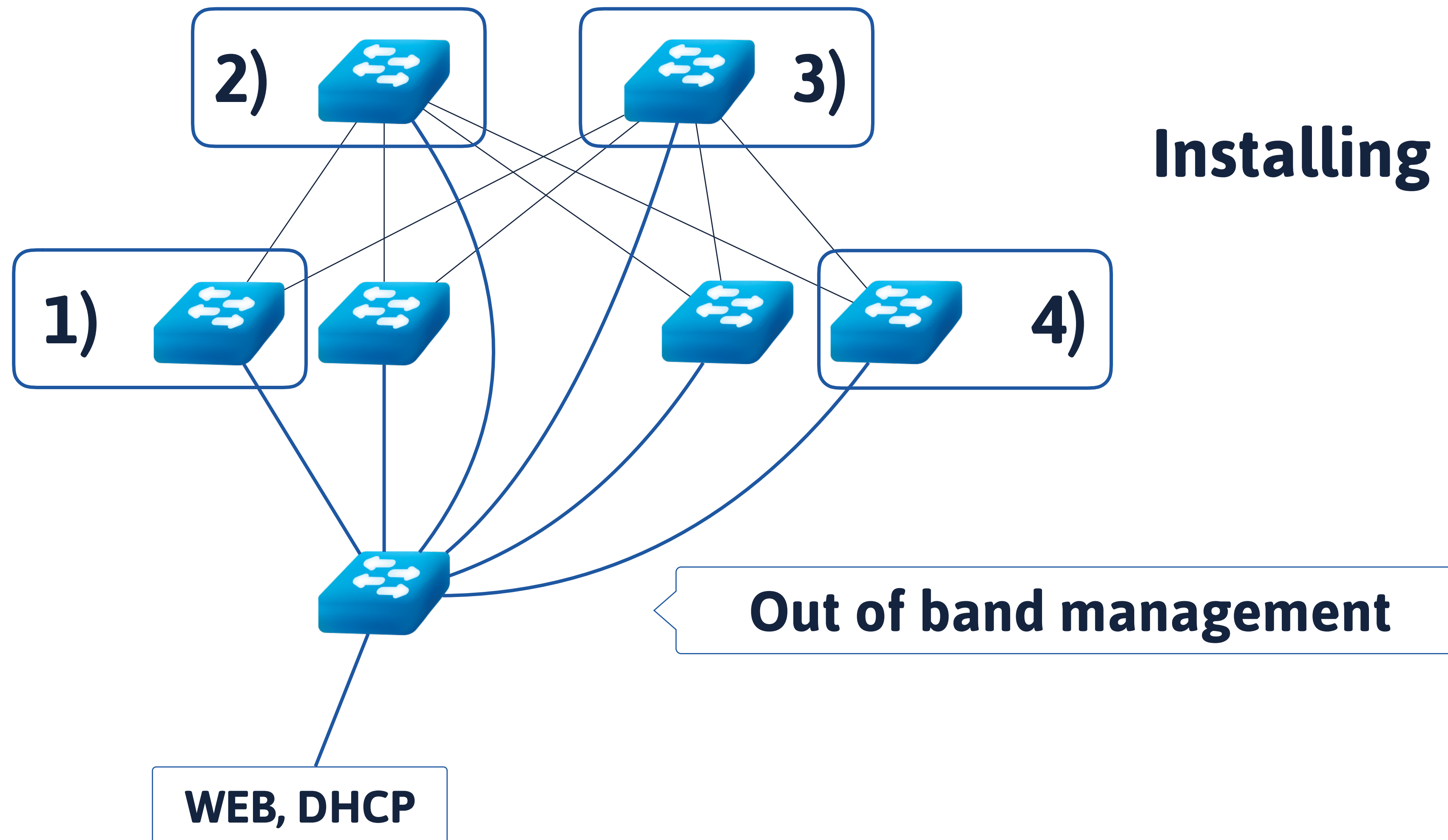
# Identification may be a challenge





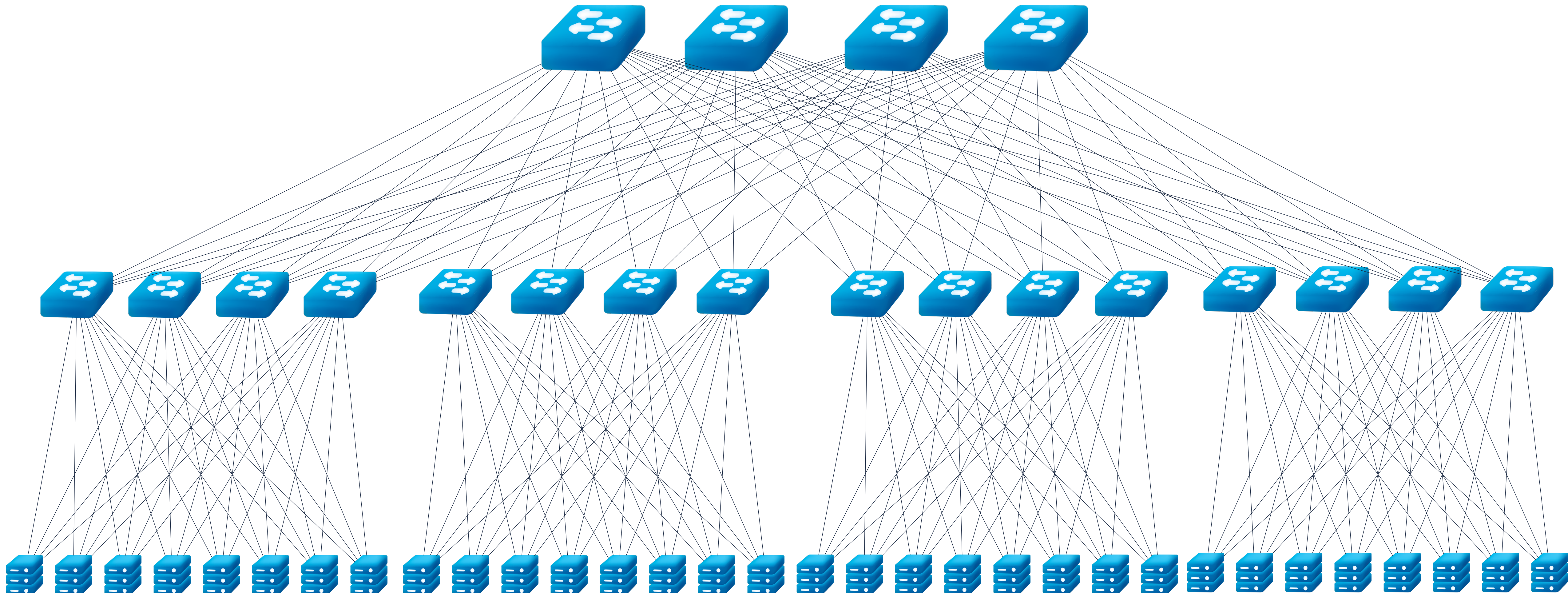
# Identification may be a challenge

Installing one by one ?



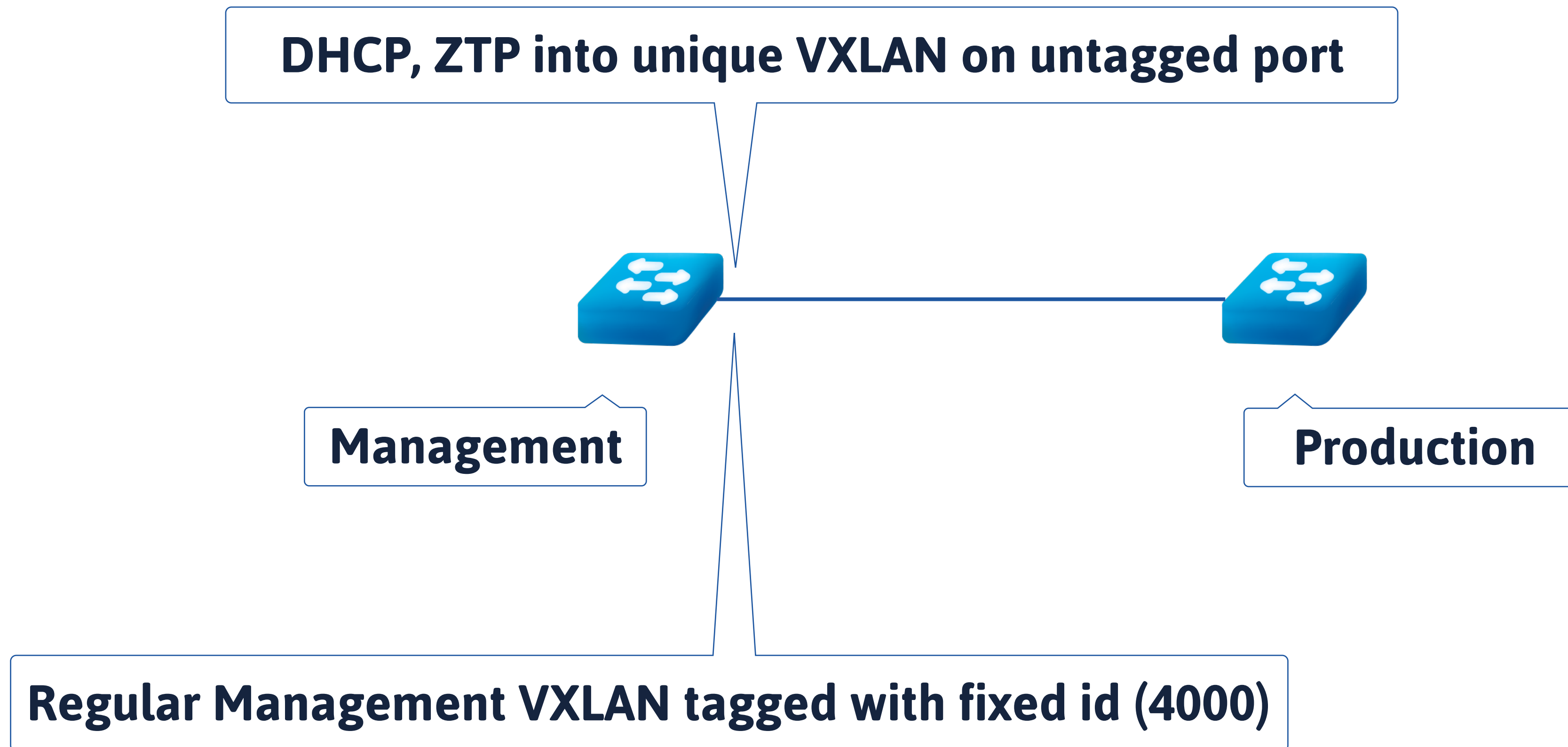
# Identification may be a challenge

Installing one by one - **Does not scale**





# SMART out of band management



**Just tell your dashboard which management port is used for each switch**

# While switch is identified

```
option cumulus-provision-url = "http://10.254.128.32/provision.sh";
```

Individual URL for every switch - AUTOMATICALLY

- A) Push License Key**
- B) Configure Management & production IP addresses**
- C) Install orchestration and management agent**

# While switch is identified

```
option cumulus-provision-url = "http://10.254.128.32/provision.sh";
```

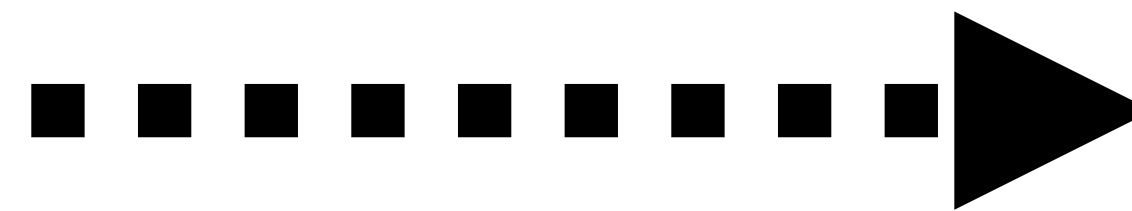
Individual URL for every switch - AUTOMATICALLY

- A) Push License Key**
- B) Configure Management & production IP addresses**
- C) Install orchestration and management agent**

**Imagine how easy it is now for data center guy to replace/deploy a network switch**



# LET'S CHECK HOW THE LIVE INSTALL IS DOING





# Questions ?



# Thank YOU

Welcome to our **Booth #21** on the show floor  
for more details





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