- Juniper Open Learning -

**Using EVE-NG with
Juniper Topologies**

15.09.2020

Christian Scholz (🐦 @chsjuniper)

Agenda

➢ Why do we need labs? And why EVE-NG?

➢ What's new?

➢ Why on earth do we want IPv6 in the lab?

➢ Custom templates
  + commit system in EVE-NG [DEMO]

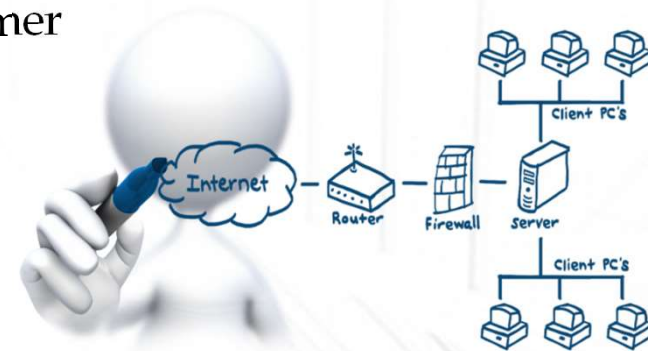➢ EVE-NG in IPv6 only environments [DEMO]

➢ Q+A

Agenda

- Why do we need labs? And why EVE-NG?

- What's new?

- Why on earth do we want IPv6 in the lab?

- Custom templates
  + commit system in EVE-NG [DEMO]

- EVE-NG in IPv6 only environments [DEMO]
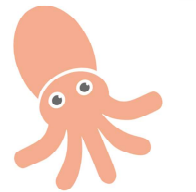
- Q+A

Why do we need Labs?

- Study for Certification

- Recap of courses (AATP)

- Verifying a solution for ourselves / partner / customer

- The „right" tools for the „right" Job

Why EVE-NG?

- Multivendor // Vendor neutral

- Virtual and Bare-Metal

- Easy to install

- From small to **HUGE**

- Watch out for copycats…
  Genuine: https://www.eve-ng.net/

Qewig

Lab is Simple

Virtual or Hardware?

- Ubuntu installed on BMS and EVE installed

Hardware

Hypervisor (KVM) [EVE]

Juniper vDevice

- ESXi installed on BMS and EVE as VM inside ESXi

Hardware

Hypervisor (ESX)

Hypervisor (KVM nested) [EVE]

Juniper vDevice

- Windows Client running Workstation, running EVE

Hardware

OS (Windows)

Hypervisor (Workstation)

Hypervisor (KVM nested) [EVE]

Juniper vDevice

Agenda

EVE-NG v3 hits the Shelves – Ubuntu 18.04

- The new Pro Edition (called EVE 3.0) is running on Ubuntu 18.04 as underlay!

- New CPU / RAM management backend

- New UI design features
      label placement
      line style options

- PDF support for Lab Tasks

- Screenshot Topology

New images (Q4-2020)

- vQFX 20.2 with <mark>preconfigured!!!!</mark> KVM images

Download Results for: VQFX EVALUATION | ✕

Select: OS [vQFX EVAL   ▾]   VERSION [20.2   ▾]   Expand All +

✕ Application Media   2 File(s)

Description	Release	File Date	Downloads
VQFX10K PFE pre-configured disk image for KVM	20.2R1	28 Aug 2020	qcow (727.50MB) Checksums
VQFX10K RE pre-configured disk image for KVM	20.2R1	28 Aug 2020	qcow2 (643.75MB) Checksums

ICYM

- vMX also available as nested Device! → needs custom **single** template

Description	Release	File Date	Downloads
ESXi	19.4R2	07 May 2020	tgz (6046.12MB) Checksums
KVM	19.4R2	07 May 2020	tgz (6041.64MB) Checksums
Limited - KVM	19.4R2	07 May 2020	tgz (5953.34MB) Checksums
Limited - vMX ESXi	19.4R2	07 May 2020	tgz (5957.81MB) Checksums
ESXi	19.4R1	26 Dec 2019	tgz (6056.54MB) Checksums
KVM	19.4R1	26 Dec 2019	tgz (6048.88MB) Checksums
Limited - vMX ESXi	19.4R1	26 Dec 2019	tgz (5968.58MB) Checksums
Nested BYOL	19.4R1	26 Dec 2019	vmdk (2647.25MB) Checksums

Agenda

Why on earth IPv6 in the Lab?

- Question is: Why not?

- IPv4 is becoming really expensive / impossible to get

- The „end" is here – goodbye IPv4…

Pros of IPv6 in the Lab?

- Finally we get rid of NAT

- Practice now and implement sooner (not later)

- One single /64 = 18.446.744.073.709.551.614 Hosts

- Not even my EVE-NG Server can handle that... 😱

Agenda

➢ Why do we need labs? And why EVE-NG?

➢ What's new?

➢ Why on earth do we want IPv6 in the lab?

➢ Custom templates
+ commit system in EVE-NG [DEMO]

➢ EVE-NG in IPv6 only environments [DEMO]

➢ Q+A

What are custom templates?

- Templates for hosts, that are not yet implemented in EVE-NG
  → they are always „implemented", they are just not tested (yet)

- Not to be confused with images / prepared images

- Examples: vSRX3.0, JunOS Space Policy Enforcer, JATP

- Need to know the settings of your KVM-Image

Commit system in EVE-NG?

- Yes – just like JunOS, EVE (qemu) has a commit system (but only in one direction)

- Allows you to modify an image and always start from there

- Quickly spin up your very own custom images tailored to your environment

- Works with all images / Vendors that run on qemu!!!

Agenda

➢ Why do we need labs? And why EVE-NG?

➢ What's new?

➢ Why on earth do we want IPv6 in the lab?

➢ Custom templates
+ commit system in EVE-NG [DEMO]

➢ EVE-NG in IPv6 only environments [DEMO]

➢ Q+A

EVE-NG in IPv6 only environments

- AS206384 runs IPv6 only – this should be easy right?

- Before Dec 2019:

- NAT64 /
  IPv4 secondary address for License + Updates

- Update „challenges"

Actual picture of me at 3AM...

EVE-NG in IPv6 only environments

- After Dec 2019:
  Deployed the BMS EVE, used IPv6 address – done

- If I can do it → You can too!

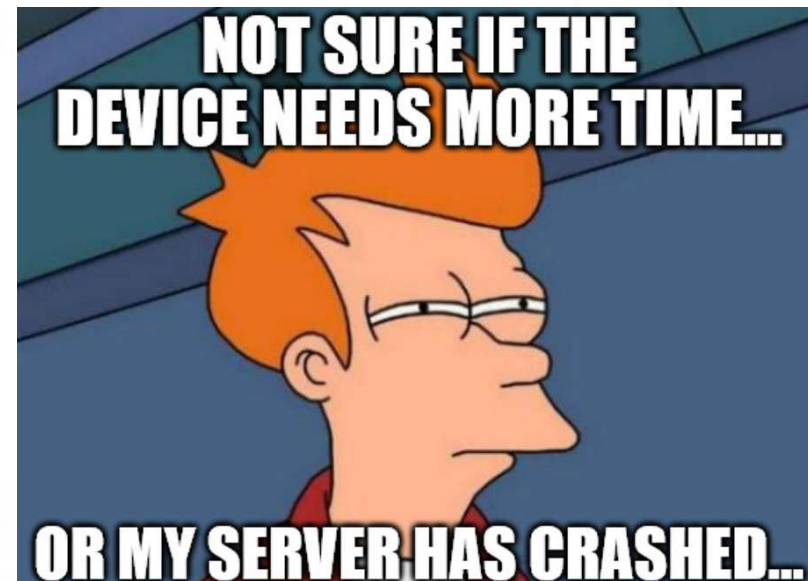# STOP!

Agenda

➤ Why do we need labs? And why EVE-NG?

➤ What's new?

➤ Why on earth do we want IPv6 in the lab?

➤ Custom templates
+ commit system in EVE-NG [DEMO]

➤ EVE-NG in IPv6 only environments [DEMO]

➤ Good Advice

➤ Q+A

The good advice – save the pain for later

- Multicore-Problem – less is more

- vQFX em1 Interface

- Virtual Chassis / VCF on vQFX

- Booting the Labs might take TIME…

More Infos

- Youtube Video Series covering EVE-NG and Juniper:
  https://www.youtube.com/netchron

- EVE-NG Youtube Channel:
  https://www.youtube.com/channel/UCh-RxHfEpYzo2Sgflq4_vAA/videos

- EVE-NG Website:
  https://www.eve-ng.net/

- EVE-NG Forum:
  https://www.eve-ng.net/forum/

- All-Access Training Pass:
  https://www.juniper.net/allaccess/

Agenda

- Why do we need labs? And why EVE-NG?

- What's new?

- Why on earth do we want IPv6 in the lab?

- Custom templates
  + commit system in EVE-NG [DEMO]

- EVE-NG in IPv6 only environments [DEMO]

- Q+A

Thank you // Q+A

Christian Scholz

@chsjuniper

youtube.com/netchron

jncie.eu

chs@ip4.de

linkedin.com/in/chsjuniper/

xing.com/profile/Christian_Scholz124/