Scott Lowe, VCDX 39
Author, Blogger, Geek
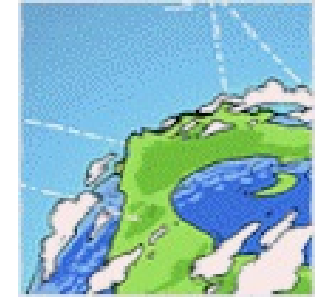http://blog.scottlowe.org / Twitter: @scott_lowe
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Getting Started with Network Automation

Some resources, tips, and advice for getting started with network automation

Before we begin

- Get involved! Audience participation is encouraged and requested

- If you use social media, feel free to post updates about this presentation (on Twitter include the hashtag #NPUG)

- You are welcome to take photos or videos of today's presentation and share them online

- All materials available at https://github.com/lowescott/2017-denver-npug-meeting

A quick intro

- Husband, father, Jeeper, all-around geek

- Blogger (12+ years at http://blog.scottlowe.org)

- Author (7 books so far, #8 due in December)

- Speaker (Interop, VMworld, DevOps Networking Forum, OpenStack Summit, local meetups)

- Podcaster (The Full Stack Journey podcast)

- Employee at VMware, Inc.

Agenda

- New network automation book

- Why you should get started with network automation

- Resources for getting started

- Voices to follow

- Tools you'll commonly encounter in network automation

- Easy ways to get started

New network automation book

- Network Programmability and Automation, from O'Reilly

- Co-authored with Jason Edelman and Matt Oswalt

- Aims to provide information to help you get started with network automation

- Covers Linux, Python, XML/JSON, APIs, configuration management tools, & continuous integration

- More information available at http://shop.oreilly.com/product/0636920042082.do
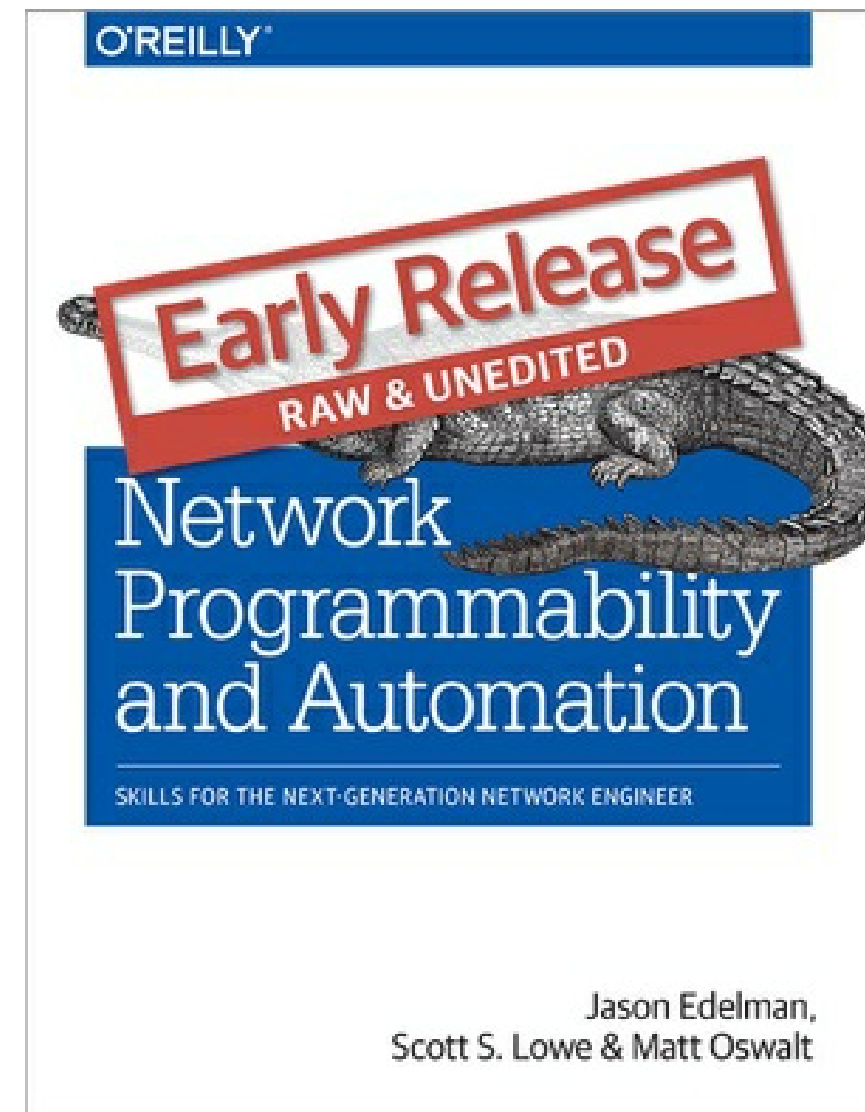
Why you should get started with network automation

- Improved consistency in configuration across devices

- No more "snowflake" configurations

- Less time spent verifying configurations

- The automation artifacts can double as documentation

- More time to spend on strategic efforts

Resources for getting started

- NetworkToCode Slack team (join at http://slack.networktocode.com)
  - Lots of great channels here
  - Many of the "who's who" in network automation frequent these channels

- Python for Network Engineers (https://pynet.twb-tech.com)
  - Check out the free email course on learning Python
  - Paid courses also available

- Ivan Pepelnjak's Building Network Automation Solutions course (http://www.ipspace.net/Building_Network_Automation_Solutions)

Resources for getting started - demo

A quick look at the NetworkToCode Slack team and available channels

Voices to follow

- David Barroso ([@dbarrosop](#) on Twitter, involved with NAPALM)
- Kirk Byers ([@kirkbyers](#) on Twitter, also involved with NAPALM)
- Jason Edelman ([@jedelman8](#) on Twitter, founded NetworkToCode)
- Matt Oswalt ([@mierdin](#) on Twitter, works with StackStorm)
- Mircea Ulinic ([@mirceaulinic](#) on Twitter, works with NAPALM and SaltStack)
- Ivan Pepelnjak ([@ioshints](#) on Twitter, dabbles in most everything)

Tools you'll commonly encounter

- Configuration management tools (Ansible and Salt)

- Python

  - NAPALM (https://napalm-automation.net)

  - Netmiko (https://github.com/ktbyers/netmiko)

- Jinja (http://jinja.pocoo.org; typically called from either Python or Ansible)

- Git (https://git-scm.com)

Easy ways to get started

- Retrieving device configurations and storing them in version control

- Verifying device configuration against stored (versioned) configuration

- Templating network device configurations

- Building reports with templates and information from devices

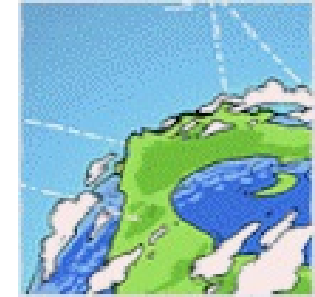# Easy ways to get started - Netmiko demo

Retrieving device configurations via Python and Netmiko

Easy ways to get started - NAPALM demo

Retrieving structured data from devices via Python and NAPALM

Questions & answers

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Thank you!