Network Automation Philosophy

Overview

- Automation as team building
- Defining architecture
- Data models
- Tools are (un)important
- Error handling
- Measuring

The Team

- Old timers may have seen this movie before
- May include more people than you thought
- Everyone has an opinion (and only some matter)

Defining architecture

- A process of mapping and abstracting
 - Supporting all router features is not going to work.
- Sustainability
- Usability
- The magic trick: doing this for both network and software side-byside

Data models

- Mostly derived from the architecture and devices themselves
- A lot of mapping work
 - Really boring
 - Really important
- Indirection and (some) duplication is okay
- Free-form injection will save you someday

Tools

- Handwaving is not a feature
- Some problems are not solved
- Template whitespace is a pain
- Libraryization makes life easier

Error handling

- Input validation
- Output validation / auditing
- Devices
- Tracing
- Failure domains

Measuring

- Automation trade-off time
- Operational performance
- Satisfaction doing more with less