Building Community around Network Automation

Scott Robohn – NAF

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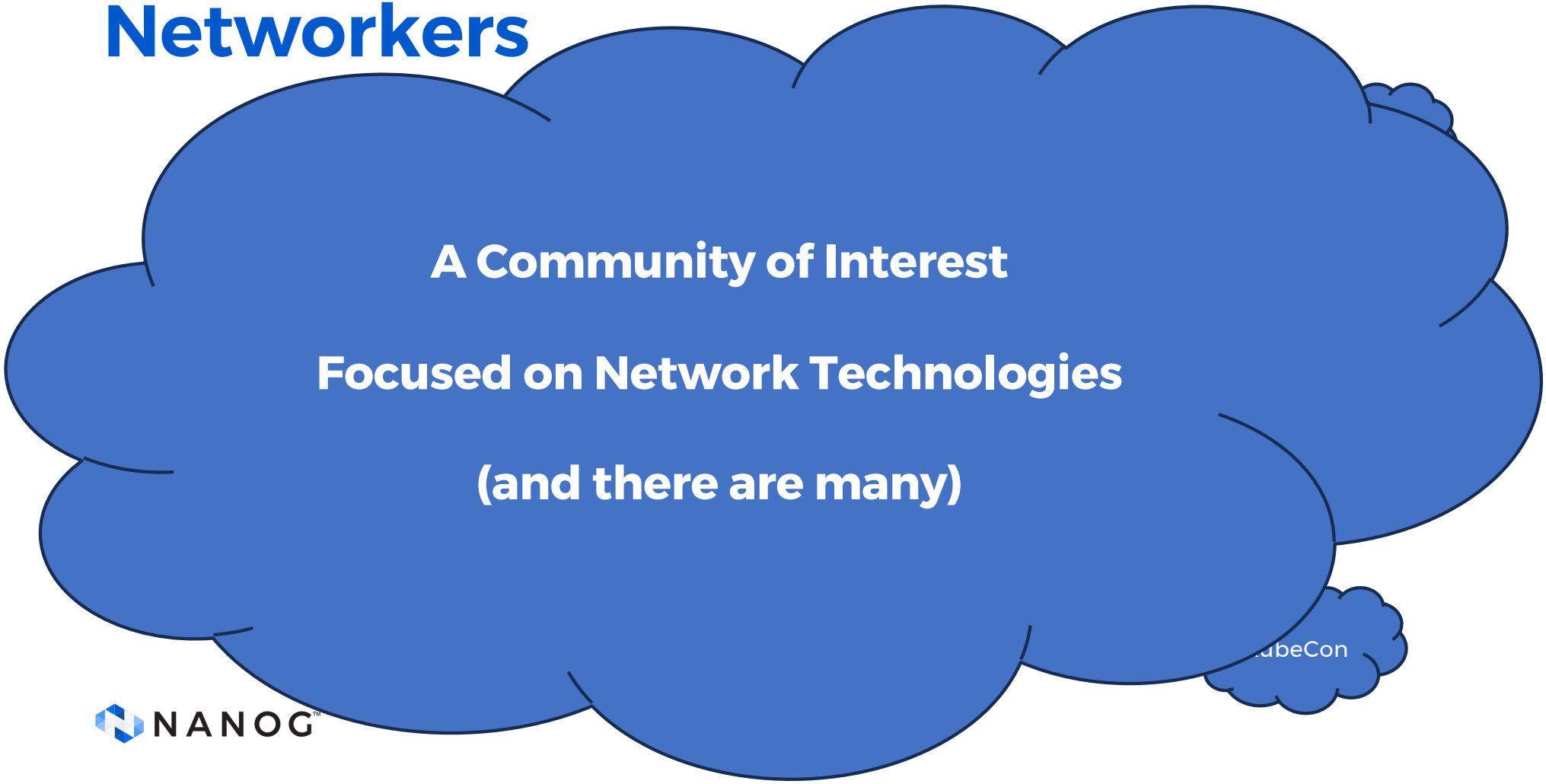
Agenda

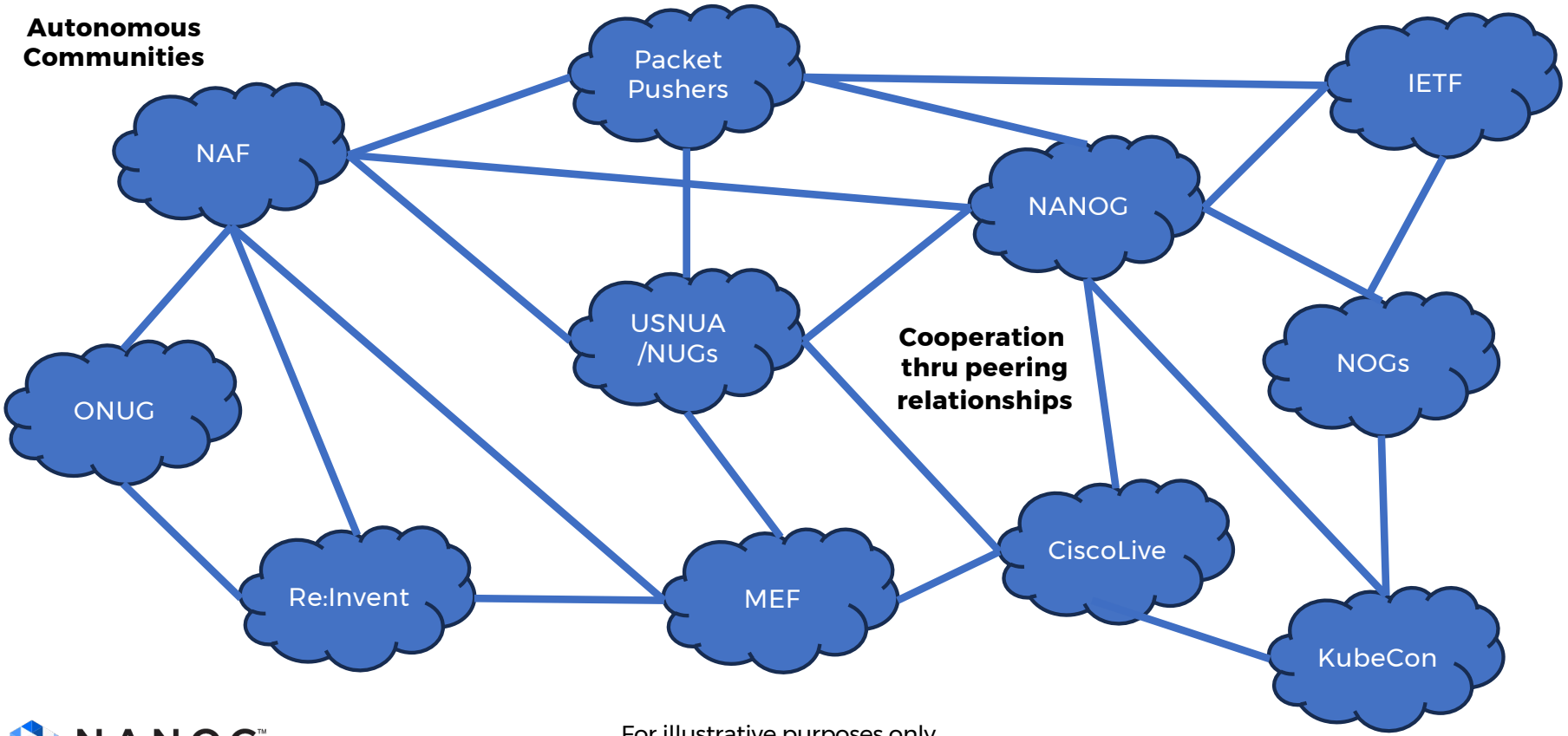
- Community
- The Question
- Answers
- Initiatives
- Futures
- Final Thoughts

Community

Networkers


A Community of Interest
Focused on Network Technologies
(and there are many)

Organizations with Focus



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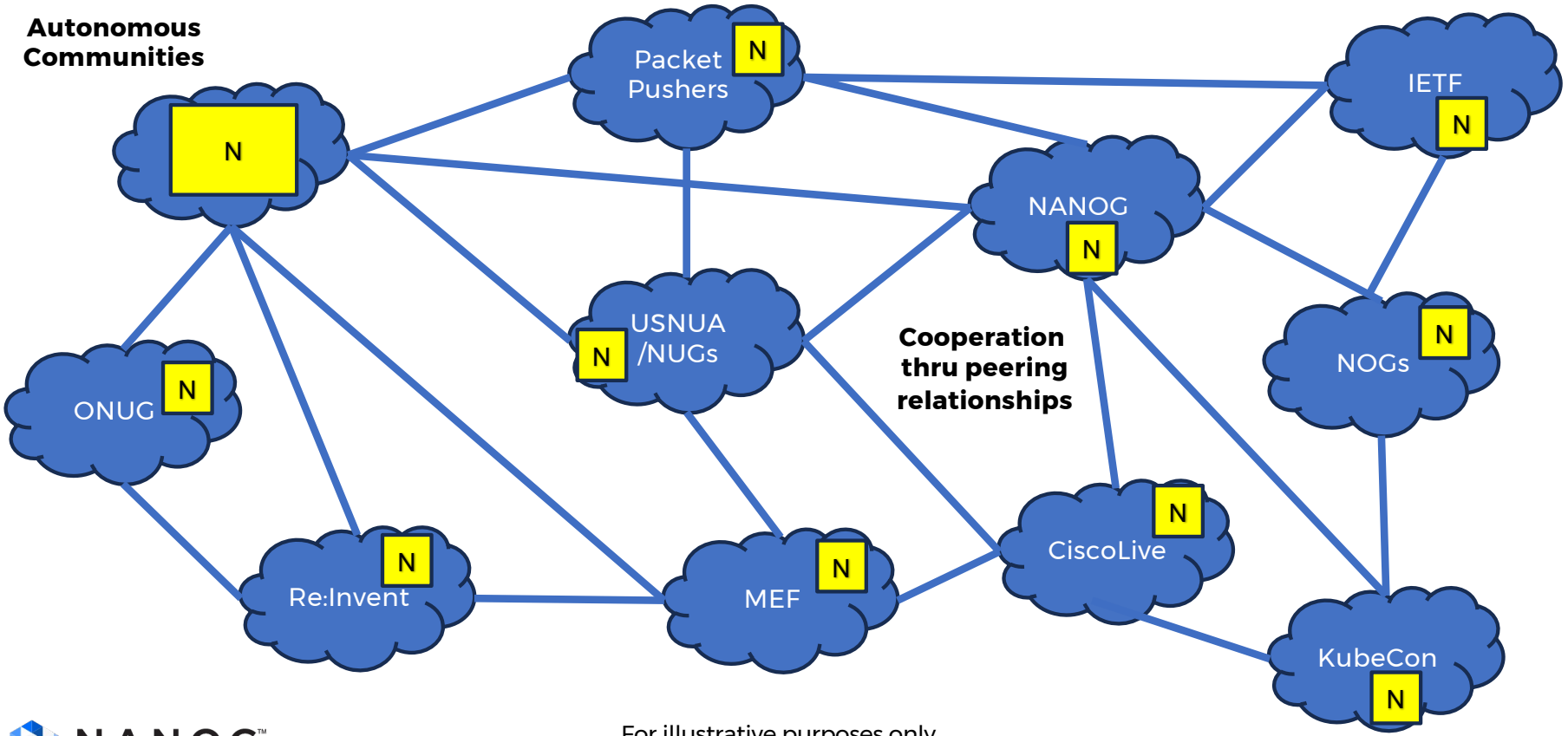
No hierarchy or relative importance of organizations is implied.
Not a comprehensive inventory of organizations.

NANOG and NAF

- NANOG: Broad
  - Wide scope of network technologies
- NAF: Narrow
  - Intentionally focused on Network Automation
  - Focused group due to specific resistance to the technology

Distributed Communities



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NAF Origins, NANOG Connections

- Many relationships within NANOG
- State of Network Automation Survey
- Conversations on resistance to network automation
- Discussion and Validation
- Clear desire for automation-focused content and community

NAF Goals

- Support the Adoption of Network Automation
- Provide a seat at the table for anyone interested in supporting this goal
  - End Users and Implementers
  - Professional Services Companies
  - Vendors and Solution Providers
  - Anyone else sharing this common interest

NAF Attributes and Constructs

- The Community
- The Organization
- AutoCon Events
- Collaboration in addition to Events
- Role of Sponsors

The Question

First: On Automation

- Our industry, like many (all?) others, is based on leveraging various modes of automation to get things done
  - Using tools to become more efficient
- This is by nature disruptive
  - Manufacturing
  - Switchboard Operators
  - PVCs to SVCs
  - Static Routes to Routing Protocols
- So: why the resistance to network automation?

Why haven’t we seen the full adoption of network automation yet?

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Answers

Terry Slattery

- Culture Change is Hard
- Failure to Adopt a Network Automation Architecture
- Failure to Use a Network Automation Maturity Model
- Lack of Commitment Across the Organization

Chris Grundemann

- When challenged, identity becomes a fortress
- Many Network Engineers have built their identity around a CLI
- Moving away from the CLI can be seen as a loss of that identity
- We've seen this before (industrial revolution)
- This time is different (not building factories)
- We must collectively shift our identity

Scott Robohn

- Rapid growth of Internet infrastructure
  - Required a get-it-done attitude
  - Encouraged hero behaviors, being “the one” who can configure the router, troubleshoot that t1, etc.
- Fear of Automation
  - Impact on jobs
  - Fueled in part by rise of AI (both the hype and actual progress)

Anna Claiborne

- History
  - Telecom legacy practices hindered innovation
  - CLI discouraged programmability and interoperability
- Ecosystem
  - Networking tools and systems were vendor-locked, lacking the open-source support (versus compute automation)
  - Limited VC due to small addressable markets
- Perception
  - Networking viewed as manual discipline, creating resistance
  - Tech advances in networking appear slower

Anna Claiborne (2)

- Continued Barriers to Network Automation
  - Vendor-driven limitations on programmability
  - Dependence on proprietary hardware and software
  - Limited investor confidence in networking as an area of innovation

Common Themes

- Tech is not the hardest part
- Culture Change is Hard
- Networking began without programmatic interfaces in mind
- Dominance of the CLI, and CLI-focused certifications
- Identity as a CLI-wielding network engineer, and resistance to changing that identity
- Fear of Change and Displacement; AI fuels that fear

Initiatives

Important Themes We See

- Embracing disruption - learning new tools
- The nature of Source of Truth
- Building a Common Vocabulary and Maturity Model
- The Need for an Automation Framework
- The Impact of AI
- Putting bespoke automations into production
- Open Source, Vendor tools, combinations of the two
- Telemetry and Observability for Automation

Projects Forming within NAF

- The Autonomicon
- Network Automation Landscape
- Network Automation Framework
- Network Service Provider BoF
- Vendor-independent certification for Network Automation / AIOps
- Regarding these and other emerging efforts:
  - No mandates
  - The community decides what's important

Futures

Why haven’t we seen the full adoption of network automation yet?

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Has the Question Been Answered?

- Yes and No
- The answers to the question are multi-faceted
- There is value in asking the question as long as there is still resistance to Network Automation

Cross-Org Collaboration

- We are all Networkers
- Definite interest in building collaboration between NAF, NANOG, and other orgs
- Current collaboration between NANOG and NAF
  - Common engaged in NAF and NANOG
  - Cat Gurinsky: NAF founding advisory board member, AutoCon presenter, and NANOG Board of Directors
  - Both NANOG and NAF supported sessions for IAB NEMOPs (Next Era of Network Management Operations)
- Let's find additional ways to collaborate

What's Next for NAF

- Network Automation is not going away
  - It's only going to become more critical
  - AI as an accelerator
  - NAF and others will help the community engage and leverage that disruption
- 2025
  - AutoCon 3, Prague, 26-30 May 2025
  - AutoCon 4, USA TBD, Nov 2025 (details forthcoming)
  - NAFcast
- 2026 and Beyond

Final Thoughts

Personal Observations

- Power of Community
- Part of the heart of the Internet
- Different ways to build Community
- An eye-opening experience

How To Participate in NAF

- Come and be a part of the conversation
- https://networkautomation.forum/
- Join our Slack - open to all
- LinkedIn and Email lists
- AutoCon materials are available for all
- If you want to make a difference and collaborate with other people who want to make a difference in Network Automation, come on in and pull up a chair

Questions and Discussion

Thank You

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