

Uncommon Paths to Beginning Network Automation

13-FEB-2023

Jordan Villarreal

jvillarreal@netboxlabs.com

 [@SystemMTUOne](https://twitter.com/SystemMTUOne)

Introduction

- Technical Advocate at NetBox Labs
- 20+ years in enterprise networking
 - Healthcare
 - Manufacturing
 - Licensure
- A whole bunch of certificates
- Struggling with automation
 - Just like everyone else

Automation is hard...

netbox labs

Hypothesis (part 1 of 2)

- The function of performing network automation isn't overly difficult in concept or application
 - Robust toolsets
 - Well understood goals
 - Expanding vendor support
 - Plenty of public facing examples
 - Copious amount of training materials

Hypothesis (part 2 of 2)

- The function of introducing, adopting and operationalizing network automation as a practice is overly difficult
 - This is not a series of technical hurdles

Business justification is hard..

netbox **labs**

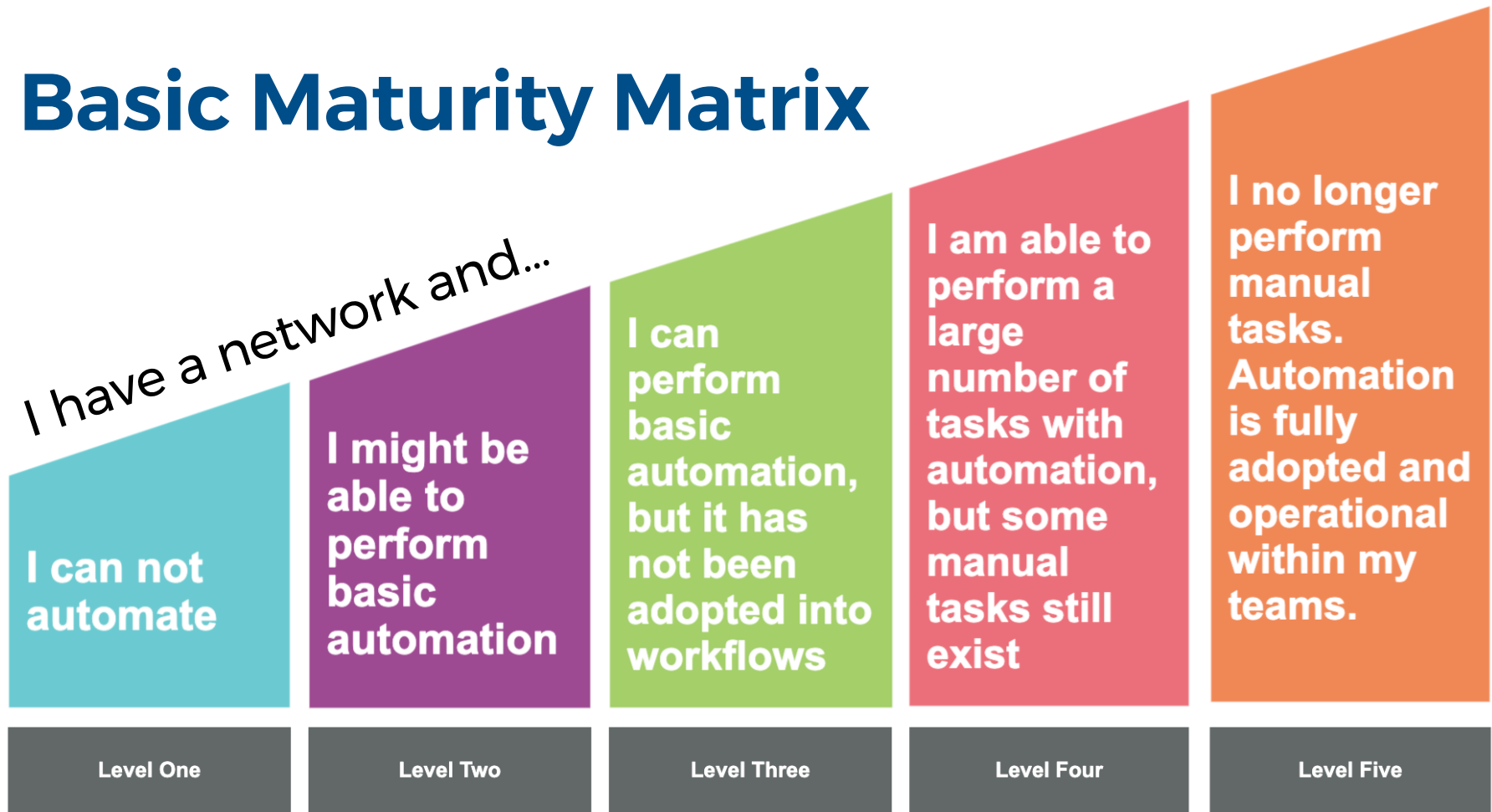
Let's Dive In

- Ensure you've attempted the typical path
- Know your automation maturity level
- Familiarize yourself with infrequently discussed:
 - Methods of adopting automation
 - Starting points for automation
- Change the story

Typical Path

- Be an engineer
- Pick a small use-case for automation
- Learn python
- Automate for the small use-case
- Simultaneously...
 - Try to convince engineers to embrace automation
 - Try to convince management to prioritize automation

Basic Maturity Matrix



Infrequently Discussed: Methods

- Vendor provided solutions
- Buy it
- Outsource for it
- Insource for it

Vendor Provided Solutions

- They work but aren't generally billed as automation-first solutions
- They aren't as prevalent in discussions as they're rarely vendor agnostic
- They are, however, automation

Buy it

- There are low-code/no-code solutions that can be used to introduce automation
- They are vendor agnostic
- They still require programming logic understanding

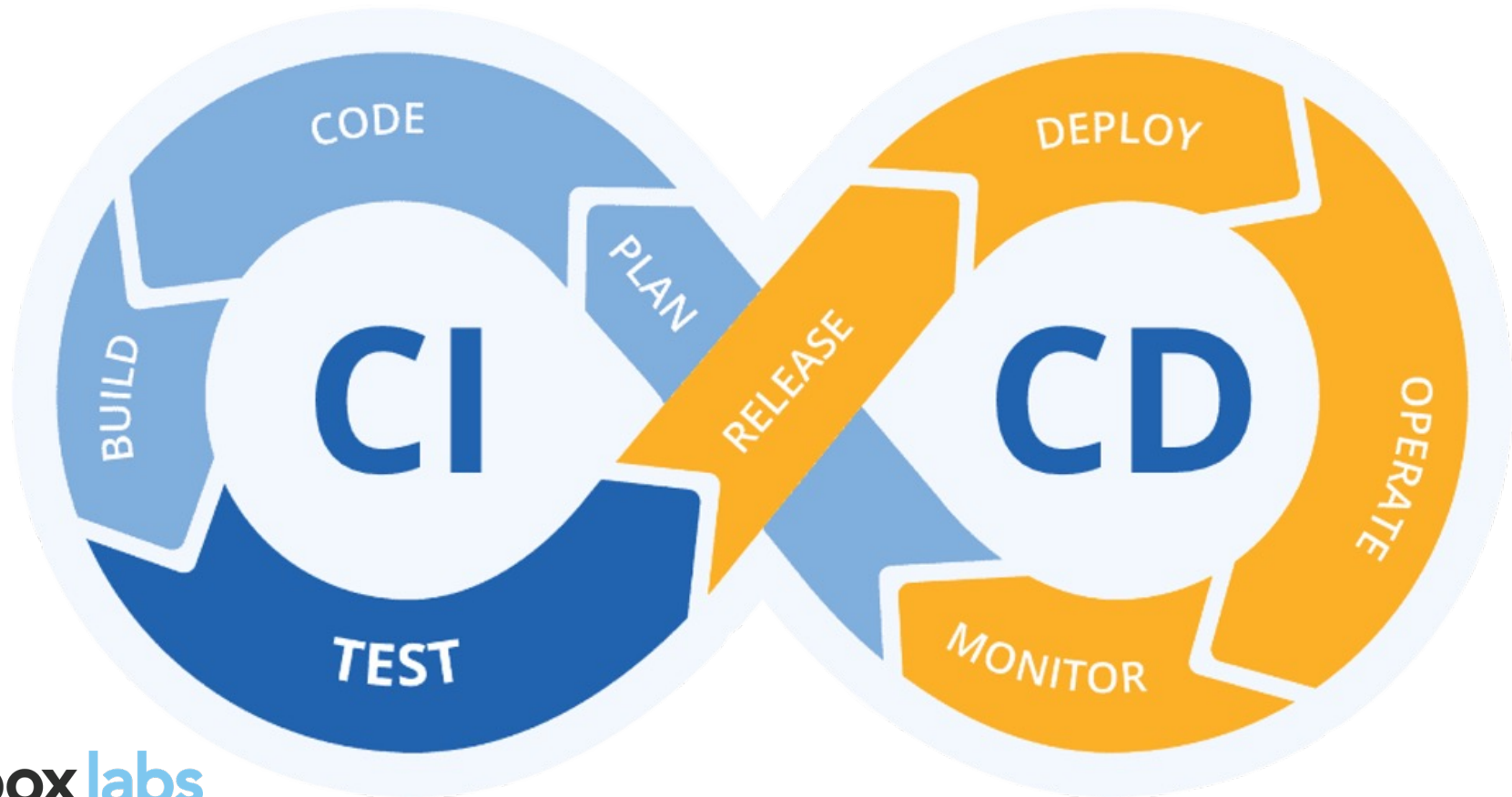
Outsource For It

- You're outsourcing the uplift, not the staff
 - Similar to implementing a new hardware platform
- Remember the goal: Introduce network automation
- Remove the burden of retooling and retraining every engineer before get automation off the ground
- With time the staff learn more and can own more of the automation process

Insource For It

- Hire someone!
- Scales better over time
- It can save time and money to have someone on staff
- Google – “Major League Baseball Network Automation”

Infrequently Discussed: Entry Point



Infrequently Discussed: Entry Point

- Most training teaches:
 - Enter on the CI side through PLAN
 - “How can I move to CODE without a PLAN?!”
- A pipeline isn't functional until all pieces have been laid
- It's ok to enter from CD
 - DEPLOY can be a vendor provided solution
 - MONITOR can be departmental service monitoring
- It may not be the most efficient path, but it is workable

Change the Story

- Engineering teams are more feature focused
 - This is by design as it helps with their jobs
 - This works against them when communicating with others who communicate differently
 - Like business leaders!
- Business leaders are more story focused
 - This is by design as it helps with their jobs
 - This works against them when communication with others who communicate differently
 - Like engineering teams!

Change the Story

- Be an engineer
- Attend the all-hands/town hall meetings
- Listen to the division heads
- Listen to the pain points
- Use their terminology
- Purposefully care

Change the Story

- My approach:
 - Avoid numbers larger than 100
 - Percentages
 - Multiples
 - Try to retell the story backwards from their point of view
 - Practice empathy
 - Use full sentences
 - Write a story; literally

In closing...

- Resonation is recognition
- There is no “right way”
- Steal my approach
- Develop your own approach
- Don't give up!

Thank you

netbox labs