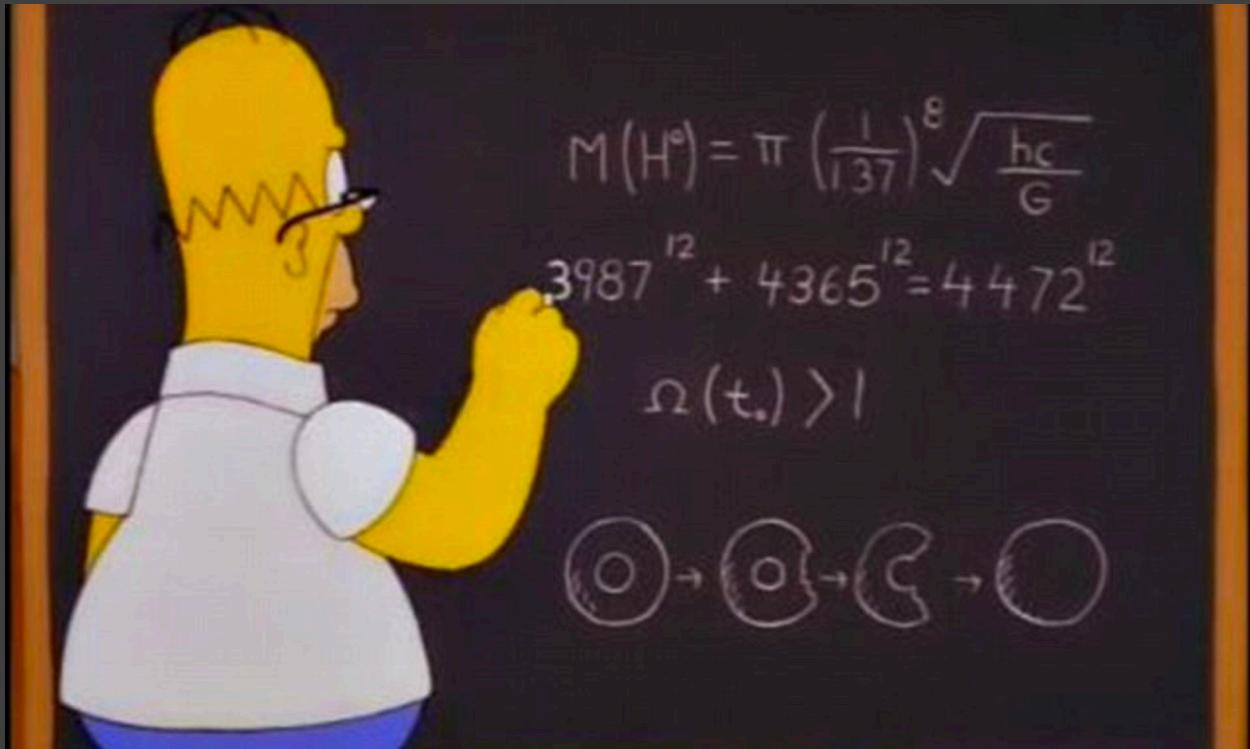


London Network Automation Meetup

David Gee
 @_ipengineer
 ipengineer.net
 arsonistgopher.com
 nremeetup.net

What can we do in 25 mins?

- As we increment our way to the panacea, what can we do today?
- Learning without shame; not punching yourself in the face



All we want to do is eat the donuts from our lab-ouring!

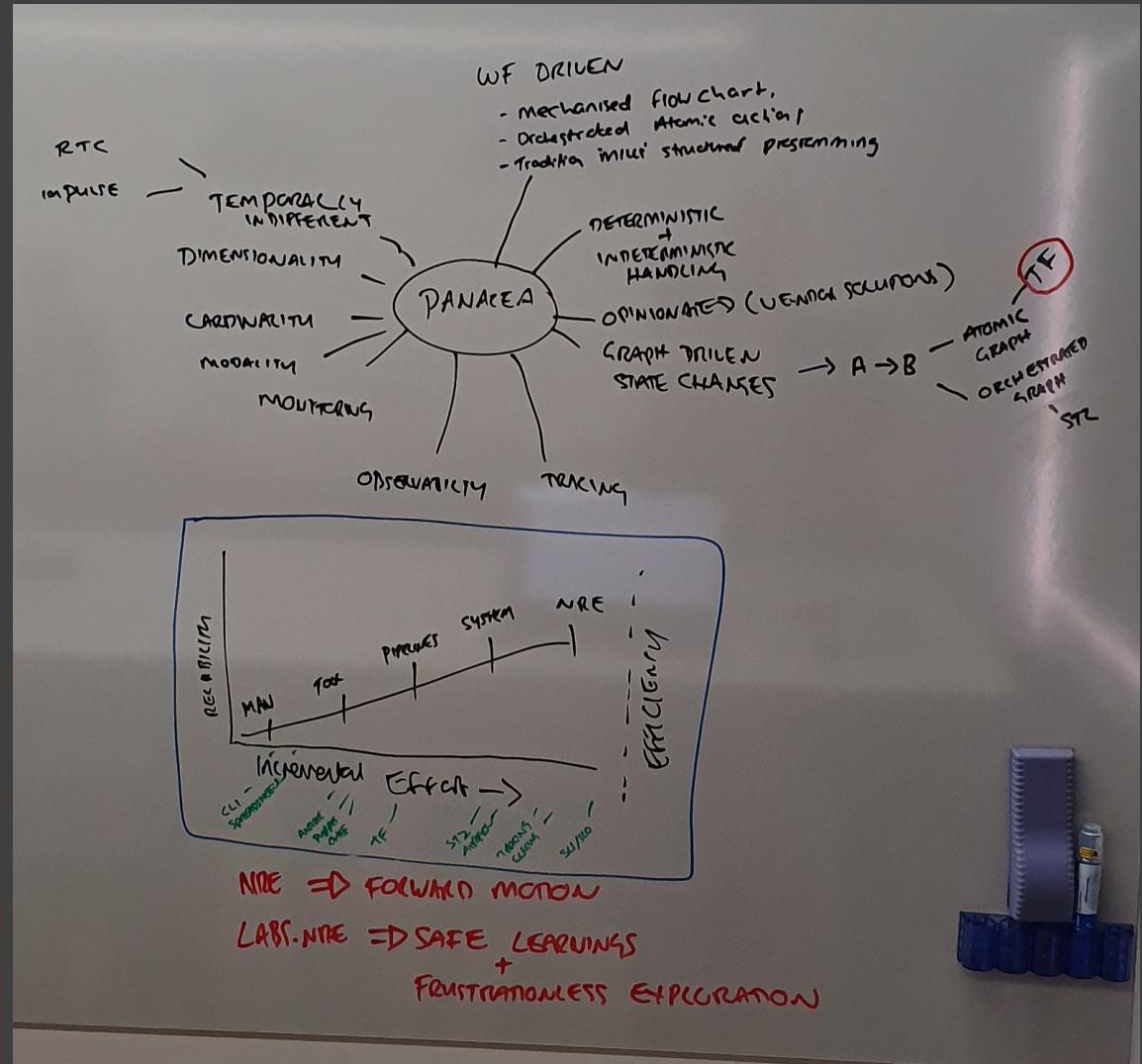
Incrementing to the Panacea

Heavy focus on tools to achieve some parts of network automation atomic actions

"Ansible is the answer! What was it you wanted to know?"

- Sorry Jason ☺

We are where we are and let's increment forwards

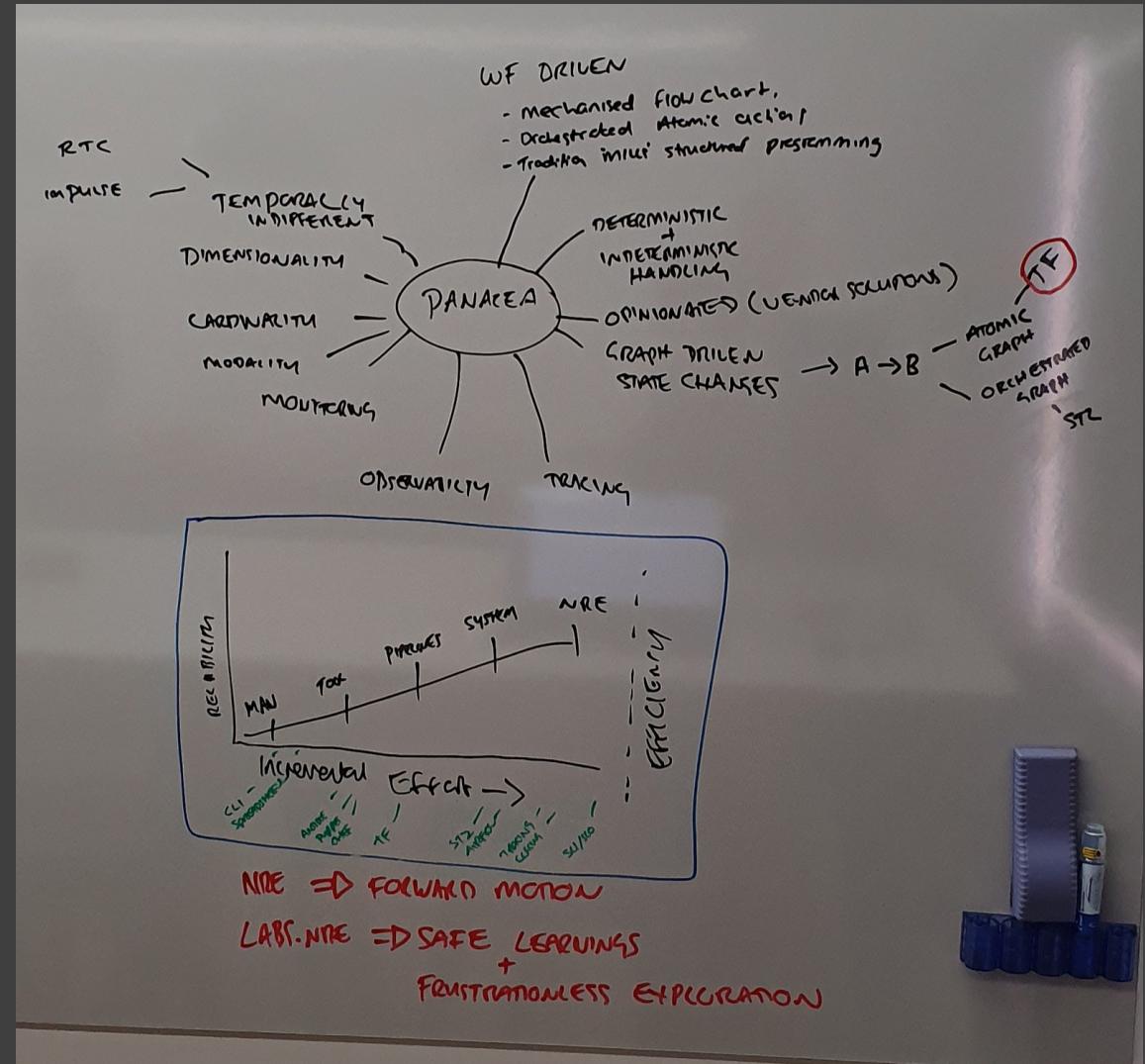


Incrementing to the Panacea

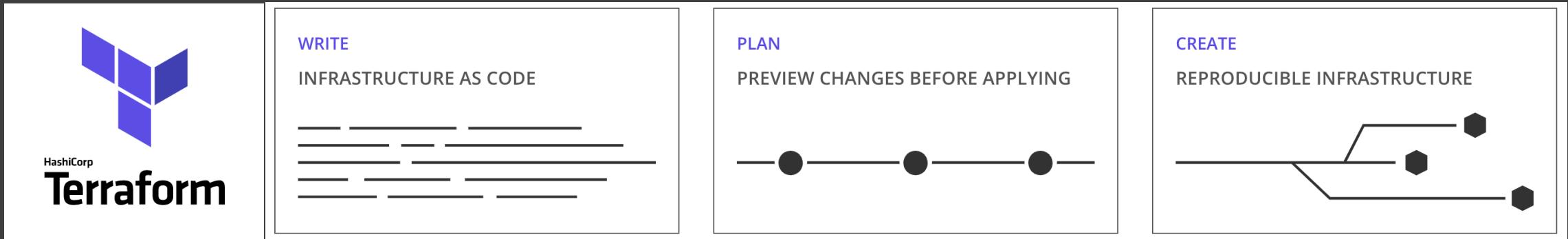
As we scale-up and scale-out, our cognitive abilities are ever-less effective

Imagine being able to change our view of a configuration graph: A->B and remove the change as easy as the forwards impulse design?

What about remove the need for post change control-plane checks?



Incrementing to the Panacea



Config is declarative and does not require vendor specific knowledge. Swap this for HCL to configure primitives.

What's the big thing here? Much like software engineers don't deal with relationships of networks very well, this still needs understanding!

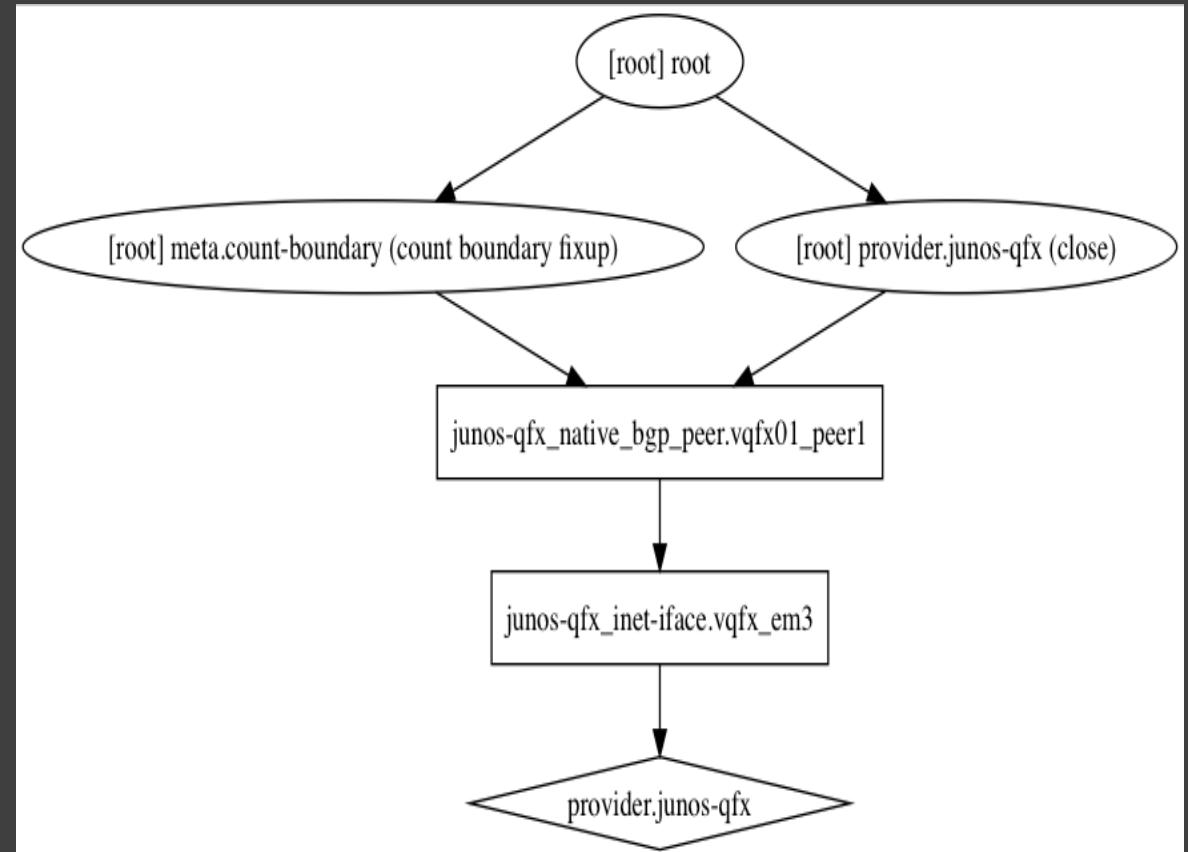
You still need to be a network engineer to do this!

Incrementing to the Panacea

TF resources are in a graph, which represents the configuration you require

TF processes these linked resources into a plan (which is a graph)

The plan is the apply-able and destroy-able. Local state is stored, reflecting the remote state



Learning Without Shame

Given the incremental way of learning and the time we are required to invest, we need to support forward motion industry wide without engineers losing hours in dodgy configs, half broken tool versions and pie in the sky ideas

The screenshot shows a web-based learning platform with a green header bar. The header includes the NRE LABS logo, a navigation menu, and social media sharing icons. Below the header, there's a toolbar with buttons for 'Lesson Diagram', 'No Lesson Video', 'Copy', and 'Paste'. A pink 'Tech Preview' button is also visible.

The main content area displays a lesson titled '1 - Terraform Init'. It features a dropdown menu for selecting other lessons. Below the title, a note says 'Image borrowed from the Terraform website: [terraform.io](#)'. The lesson content discusses the challenges of traditional networking and how Terraform can help. It includes a code snippet for initializing Terraform:

```
# This is the 'utility' container. This is used to run Python scripts, workflows, tools, commands, etc - anything needed to perform automation tasks on our network devices.
# Documentation: https://antidote.readthedocs.io
#####
antidote@terraform1:~$ antidote@terraform1:~$ antidote@terraform1:~$ terraform init
Terraform initialized in an empty directory!
```

Below the code, it says 'The directory has no Terraform configuration files. You may begin working with Terraform immediately by creating Terraform configuration files.' It shows the terminal output of 'ls -la' and the command 'cd /antidote/terraform/terraform init'.

Two 'Run this snippet' buttons are present, one for each code block. The first snippet is labeled 'Terraform Init' and the second is 'ls -la'. The lesson concludes with a note about successfully initializing Terraform and a warning about reinitializing the directory if changes are made.

Learning Without Shame

<https://labs.networkreliability.engineering>

NRE = Network Reliability Engineering

- I describe this as the art of removing ‘hope’
- Synonymous to SRE, but for networks
- End game is: SLI/SLO management and not chasing config diffs

NRE Labs: A Curriculum-as-Code platform based on custom tools

Have something to share? Submit a lesson to the NRE Labs repo!

!! Working on NRE Labs broke my love of blogging for a while. Be warned !!

FIN