

The NAF Automation Framework

A Modular Reference Architecture

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AUTROCON

THE NETWORK AUTOMATION CONFERENCE

Is There a Real Ryan Shaw?



TL ; DS

Simple building blocks that underpin any network automation framework

Terminology and a couple of key points

What It Is



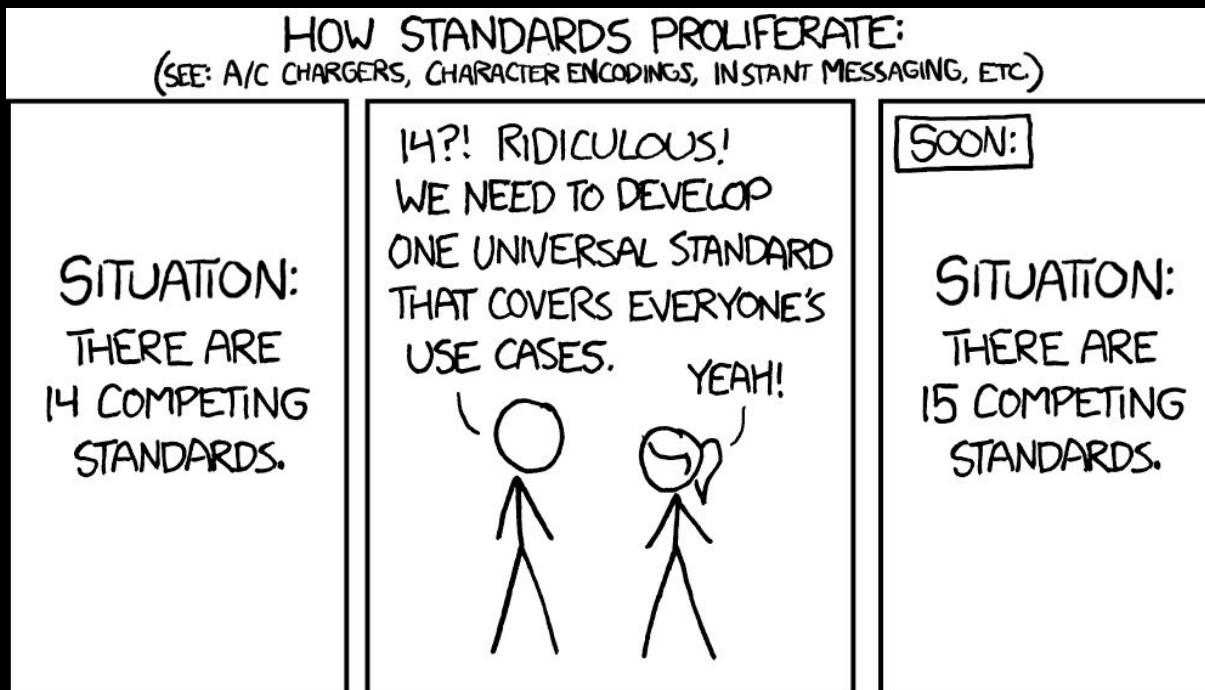
What Problem Is It Meant to Solve?



Audience



xkcd cartoon?



What Else Is This Not?

Not recommending protocols or tools

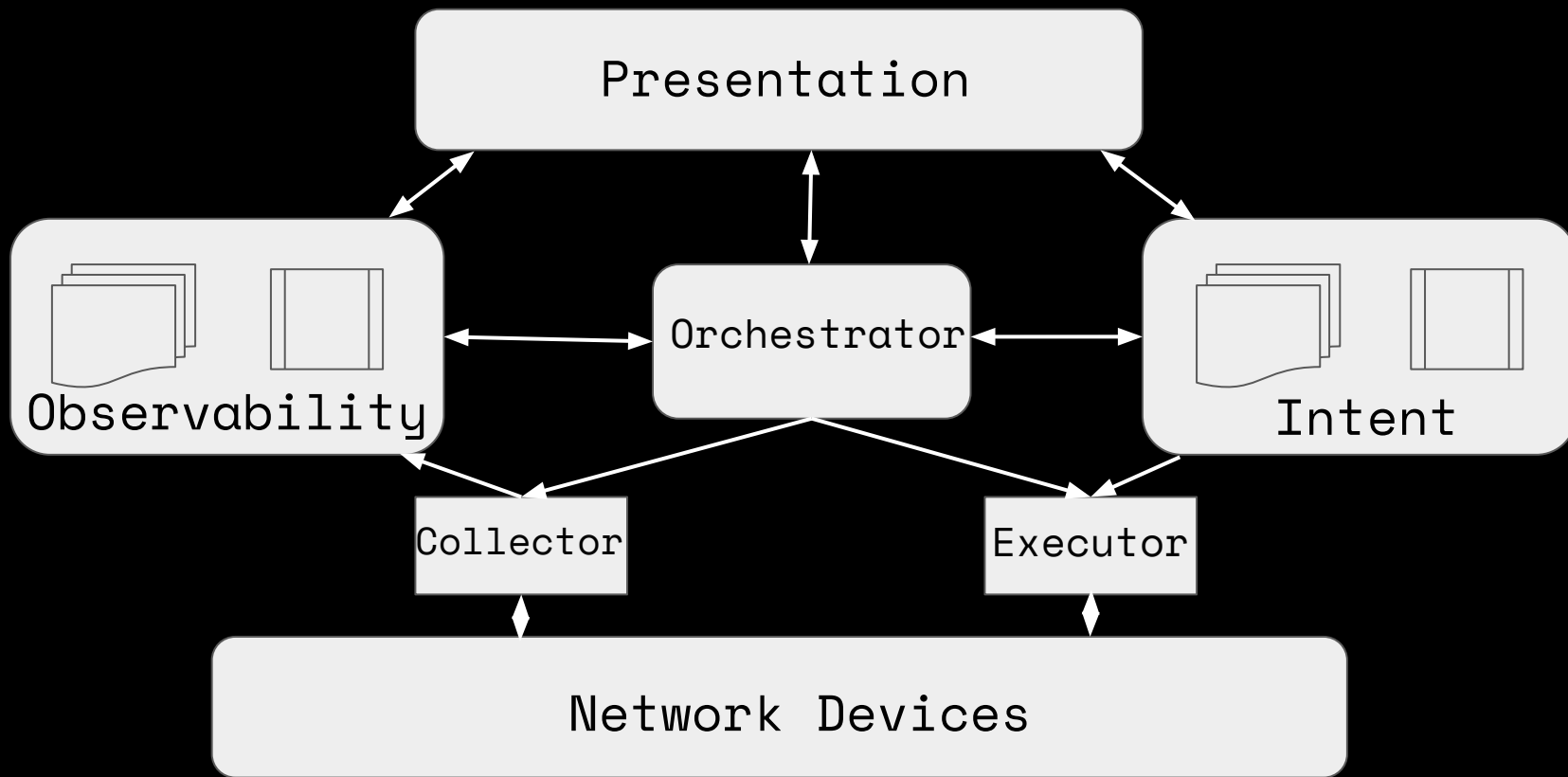
Talk about characteristics and why they matter

Be inclusive, not exclusive

Multiple Perspectives

- People who championed the current state
 - **Operators** (Ryan, Claudia)
 - **Vendors** (Wim, Srividya)
 - **Automation engineers** (Christian, Claudia, Ryan)
 - **Management Vendors** (Damien, Dinesh)
 - **Community** (NAF Slack and meetings)

Architecture



Why These Blocks?

Blocks are:

- Functional

- Simple

- Composable

Framework handles growth in:

- User sophistication

- Network scale

Intent

Captures expected
outcomes

SHOULD be:

Versioned

Extensible

Normalized

Declarative



Observability

Captures Operational
Truths

SHOULD be:

Timestamped
Queryable



Executor

Pushes the configuration

SHOULD be:

Multi-protocol

Dry-runnable

Idempotent



<https://www.starwars-universe.com/vehicule-253-super-destroyer-stellaire-de-classe-executor-executor.html>

Collector

Gather data from
network devices

SHOULD:

- Support push/pull

- Multi-vendor

- Multi-protocol



Orchestrator

Allows sophisticated coordination and integration of the various blocks

SHOULD handle failure scenarios, recovery from failures

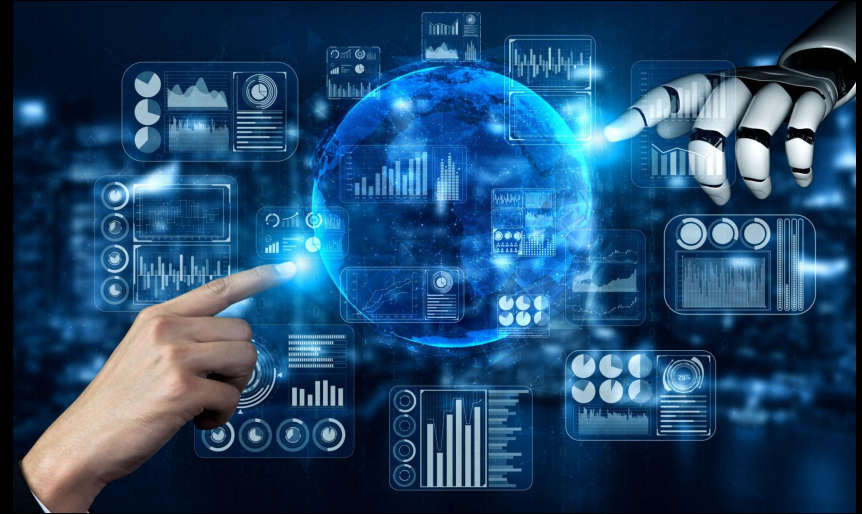


Presentation

How humans interact
with the system

SHOULD be multi-modal

Does not imply a “a
single pane of glass”, nor
precludes it



What Else?

Srividya working on examples to buttress

Urs/Steinn working on redoing their toolkit picture to fit these categories

Implementation docs

Next Steps

Seek community input

Use that to decide how to expand and make this document more useful

Iterative but fast (measurable progress presented each AC)

Links

- Github -

<https://github.com/Network-Automation-Forum/reference/blob/main/docs/Framework/Framework.md>



Questions?