YANG Datastore Telemetry (YANG Push Lite)

[draft-wilton-netconf-yang-push-lite-01]()

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IETF

What is Yang Push Lite?

Goal: to build an updated YANG Push:

- Simplify YANG Push
- More alignment with gNMI
- Merge in recent YP extensions
- Allow for more efficient implementations

What Not?

No starting from scratch
(for the protocol)

No reinventing the wheel

Why?

What about RFCs 8639 & 8641?

What about gNMI?

What has changed since -00 (IETF 122)?

Less that I would have hoped …

- Some more work to align the specification for configured and dynamic subscriptions.
- Subscription identifier => name:
  numeric type -> string identifier
- Multiple subscription paths => 1 path

Updates from discussions this week

- Agree more alignment between configured and dynamic subscriptions
- More discussions on decomposed subscriptions … and timestamps
- Some discussion on whether protocol and YANG config models should be split into two drafts?

More alignment between configured and dynamic subscriptions

- Configured vs dynamic should just be about setup
- State machine and behaviour should otherwise be as similar as possible
- There will likely be some variations, but we want to minimize those

Decomposed Subscriptions

Decomposed Subscriptions

- Need devices to be able to return data efficiently:
- Cannot always buffer and return data for a subscription in a single message
- Hence discussions about how to decompose a subscription
- But receiver must be able to put the messages back together again:
  - Need common timestamp (e.g., collection time)
  - But also want to return accurate observation time

Key draft question:

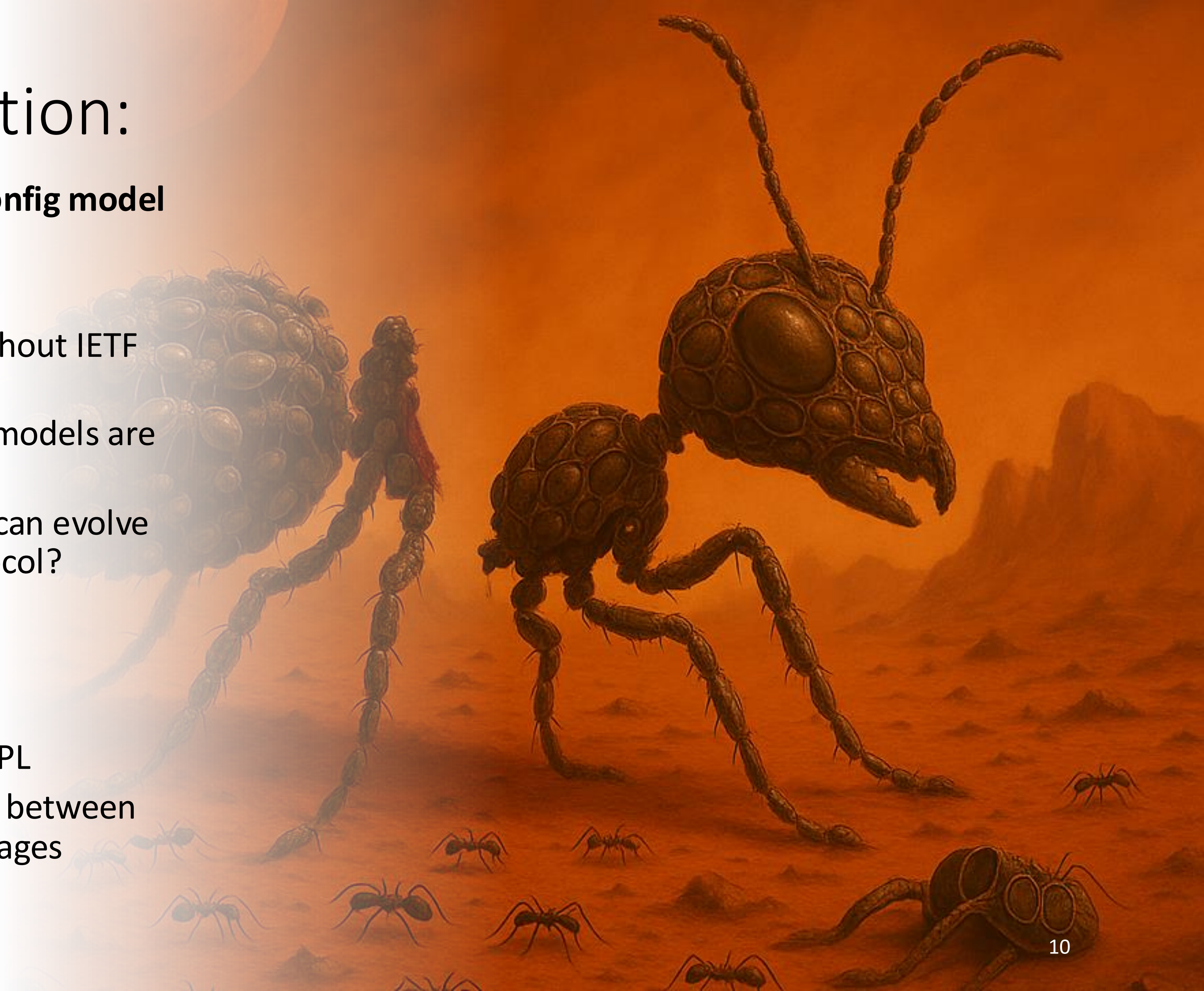
Should we document the config model in this draft or separately?

Why:

- To implement YPL without IETF config model?
- Because other YANG models are done this way
- So that config model can evolve separately from protocol?
- Shorter spec?

Why not:

- Make it easier to document/describe YPL
- Because of alignment between model/protocol messages



Plan (as before)

Work though main over the next few months:

- Bi-monthly meetings with authors
- Main focus is on solving/agreeing big issues first
- Hoping to have the document in good enough shape for a YANG Push Lite Virtual Interim just before IETF 124
- If there is reasonable support on the direction and progress, then hopefully ask for WG adoption

YP Lite Individual Draft

Github Repo: https://github.com/rgwilton/draft-yp-observability

https://rgwilton.github.io/draft-yp-observability/draft-wilton-netconf-yang-push-lite.html

A ***self-contained draft*** to define YP Lite:

- Starting with all relevant text from RFC 8639 and RFC 8641, + extensions
- Started reviews and meetings with other authors
- Main direction settled/agreed, but many issues to discuss & work through

YP Lite uses new module namespace for config, notifications and RPCs

Sounds like a lot of changes …

1. The core part of YP Lite is the same as YP
2. Merges in various extension drafts
3. Same basic data model (but in a new namespace, cleaned up and simplified)
4. Modifications to periodic notifications are minor, *except* splitting up updates to separate messages
5. Modifications to on-change are perhaps *a bit more significant* (depending on where we end up)
6. Same core subscription FSM (but less states, and more alignment between config and dynamic)