A Data Manifest for Contextualized Telemetry Data

draft-ietf-opsawg-collected-data-manifest

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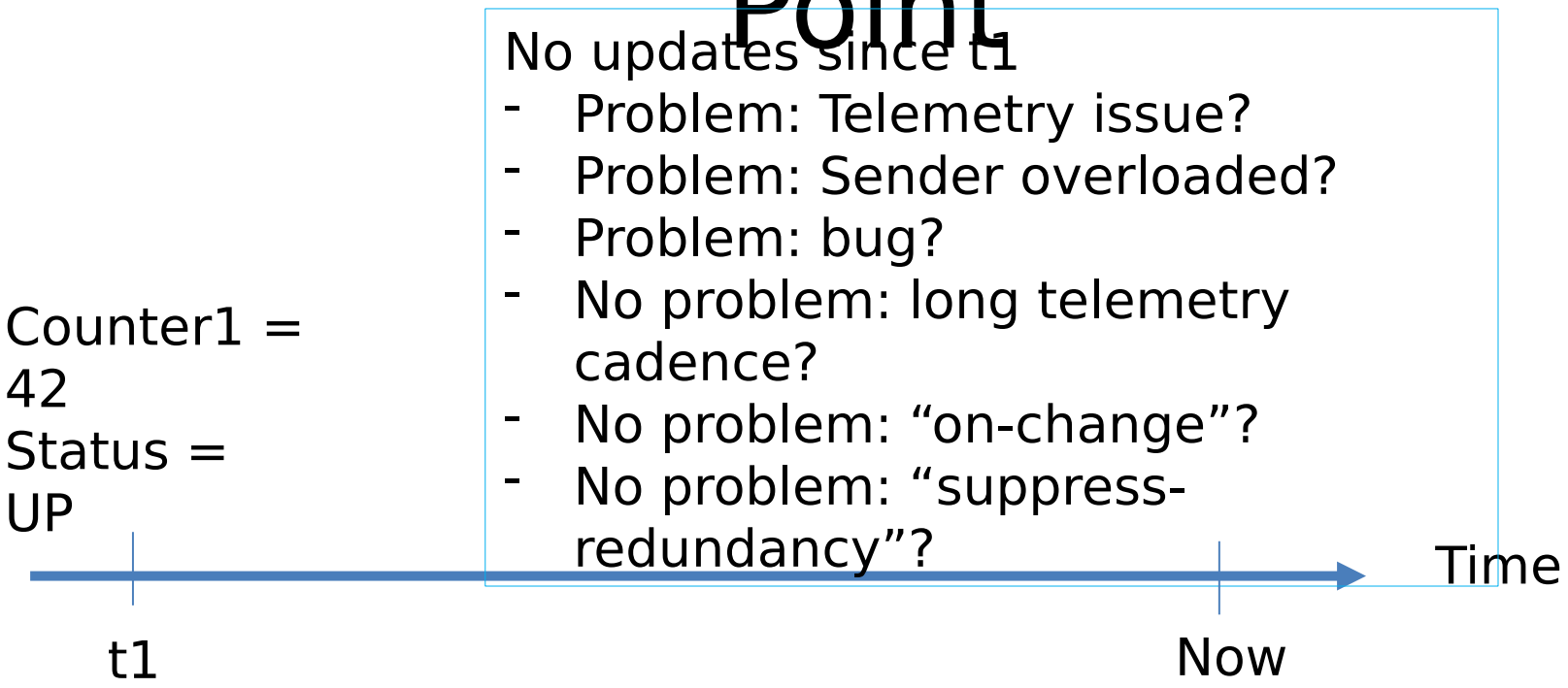
Goal & Problem Statement

- Goal is not to expose new information via YANG but rather to define what needs to be kept as metadata (or Data Manifest) to ensure that the data can still be interpreted correctly even:
  - if the source device is not accessible (from the collection system)
  - If the source device has been updated or has a new configuration
- End goal: analyze the data, from the data collection system, with the proper context, for anomaly detection and, in the end, closed loop automation
- Per-node capability discovery exists
  - YANG Modules describing Capabilities for Systems and Datastore Update Notifications, RFC9196 + YANG Instance Data File Format, RFC9195
  - Per-Node Capabilities for Optimum Operational Data Collection , draft-claise-netconf-metadata-forcollection-03
- But how were data actually metered, under which circumstances?

Data Collection Vantage Point



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Proposal: Data Manifest

- Data Manifest composed of 2 YANG models for storing the context:
  - Platform Manifest: part of the Data Manifest that completely characterizes the platform producing the data.
  - Data Collection Manifest: part of the Data Manifest that completely characterizes how and when the telemetry was metered.
- “MUST be streamed all with the data and stored along with the collected data.”
- “In case the data are moved to different place (typically a database), the data manifest MUST follow the collected data.”

Changes

- Remove copy-pasted code, replaced with code using draft-jouqui-netmod-yang-full-include
- Fallback plan if the latter is not published, use YANG Schema Mount and enforce the contents of the mount point to follow the embedded schema.

- Support files (YANG library, YANG Schema Mount) for generating the YANG tree visualization.

Next Steps

- Try to align with draft-lindblad-tlm-philatelist
  - We are focus on YANG push specific information, how to merge the two?

Open Questions

- How do we make the link with inventory efforts going on (IVY, RFC8345)? Notably for the platform-id, using the node id for RFC8345?
- Are we missing anything in the current form of the data manifest?

Feedback, suggestions, issues, PRs: https://github.com/JeanQuilbeufHuawei/draft-collected-data-manifest