Report on the CANMOD BOF (Comparing Approaches to NETCONF Modeling)at IETF-71

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Drafts Covered

Requirements:

- **draft-linowski-netconf-dml-requirements-01.txt**

- **draft-presuhn-rcdml-03.txt**

- **draft-xiao-evaluate-dml-01.txt**

Impact of Requirements on Proposals:

- **draft-chisholm-netconf-model-08.txt**

- **draft-bjorklund-yang-requirements-00.txt**

- **draft-ersue-netconf-kalua-dml-01.txt**

- **draft-mahy-canmod-dsdl-01.txt**

- **draft-johansson-netconf-owl-00.txt**

My View of Core Issues

1. Modeling language as a language
   a) Emphasize "Usability" or "Readability"?
   b) Priority of building on existing standards
2. Metamodel
3. Model re-use and revision
4. Expressive power
   a) Constraints
   b) Relationships
   c) Avoiding Semantic drift

Proposals in a Nutshell

- DSDL – RelaxNG & Schematron, doesn't nail down metamodel

- Kalua – XML-based, emphasizes its specific metamodel

- OWL – W3c Web Ontology Language, uses OWL metamodel

- XML Schema – XML Schema, defines a specific metamodel, interesting approach to versioning

- Yang – textual, hints at conventions for using a metamodel

The Hums

- **Are the requirements adequately understood? YES**

- **Is there a need for this work? YES**

- **Is there sufficient agreement on the requirements to permit progress? YES**

- **Should an IETF working group be formed? YES**

- **Would additional time spent on requirements gathering and analysis be well-spent? NO**

The Aftermath as *I* See it

- Yang, DSDL, and XML Schema have the most interest and support

- No "killer argument" has emerged to trigger strong consensus on a single approach

- ADs should pick one as starting point for work

- Yang might be the most palatable from a "could I live with this?" perspective

- Value of nailing down a metamodel is becoming clearer

Follow-up

- **A small group of proposal proponents and the design team that wrote the requirements draft will craft a WG charter proposal within two weeks, to be given to our ADs**

- **The deliverables might be:**

  - **a standards-track operator-friendly model definition language for normative use in model specifications, using the Yang draft as a starting point;**

  - **an automated, lossless mapping to a standards-track tool-friendly language, probably based on DSDL;**

  - Include essential elements of a meta-model to facilitate the use of the operator-friendly language