SDN Layers and Architecture Terminology

draft-haleplidis-sdnrg-layer-terminology

IETF – 88 Vancouver

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Draft Motivation

- Several frameworks are self-defined as 'SDN', and
  - most, if not all, have defined their own SDN layer model accompanied by distinct terminology
  - earlier work at the IETF fits well into the SDN sphere but uses different terminology
- What does "SDN" encompass *exactly*?
  - Which "layers" are key?
  - What are the interactions between the layers?

Draft Goals

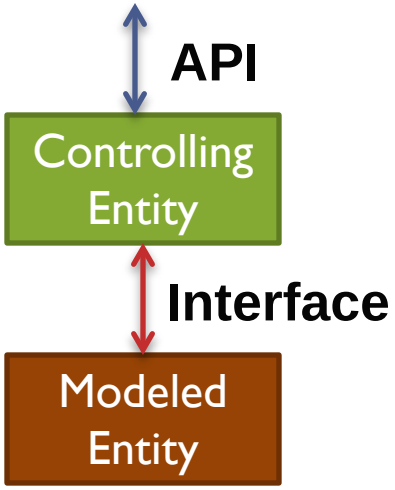
- Create a reference document for SDNRG discussions
  - address "Survey of SDN approaches and Taxonomies" in the RG Charter for Potential Work Items
  - in contrast with an academic survey which expresses one's pov, this is a document based on RG review and consensus
- Agreement on common terms as we move forward in SDN research
  - Create a reference layered model for SDN
  - Map current frameworks on SDN model

Draft Non-goals

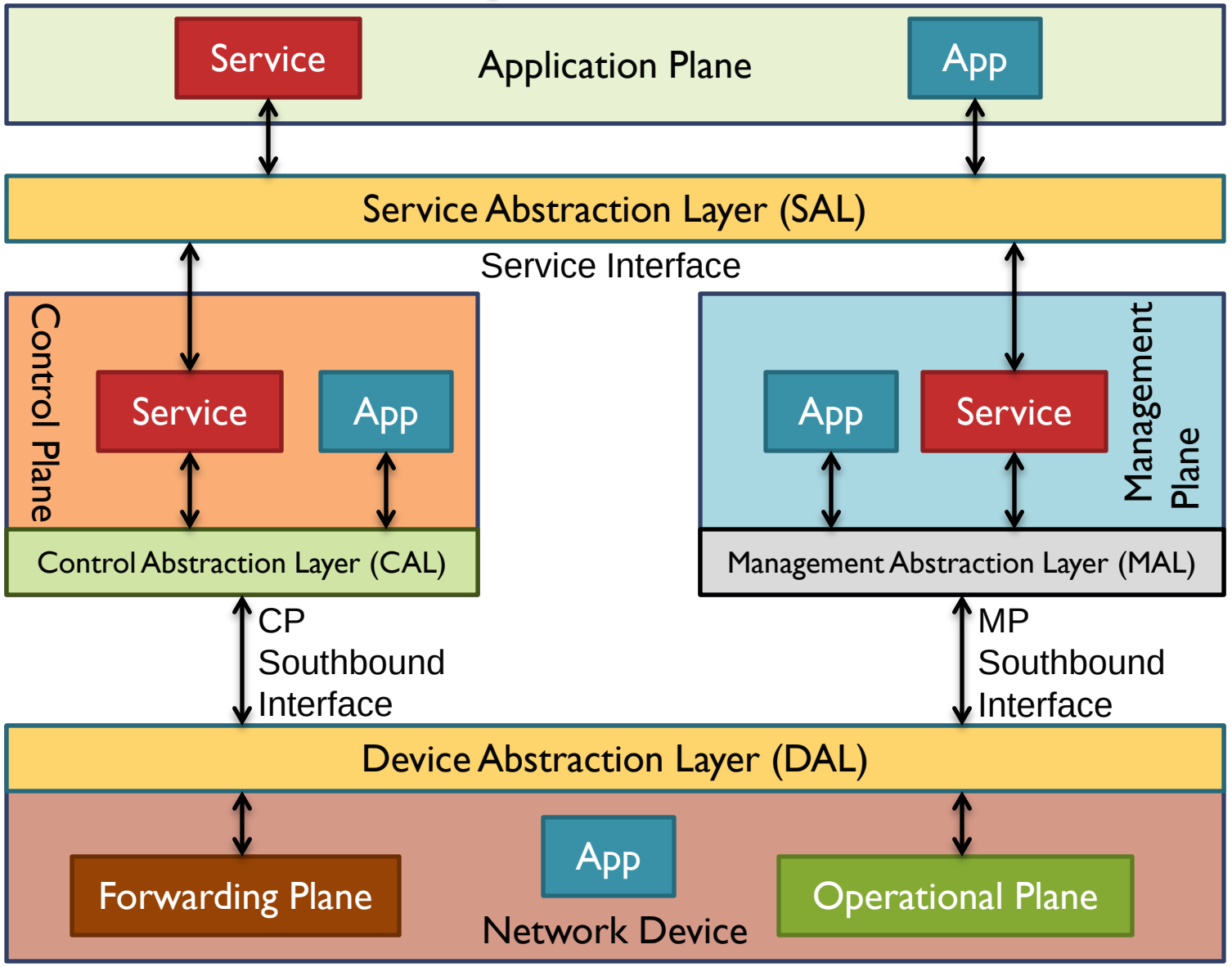
- No new specification
  - Instead we focus on documenting what has already been specified at IETF and other relevant bodies
- No new standard
  - This is an informational draft

SDN

- Functionality Separation:
  - Model
  - Separate via interface
  - Service APIs northbound
- Applied to networking
- Why stop at the forwarding plane?
- What about the management plane?
- Which protocols fit in this model and how?



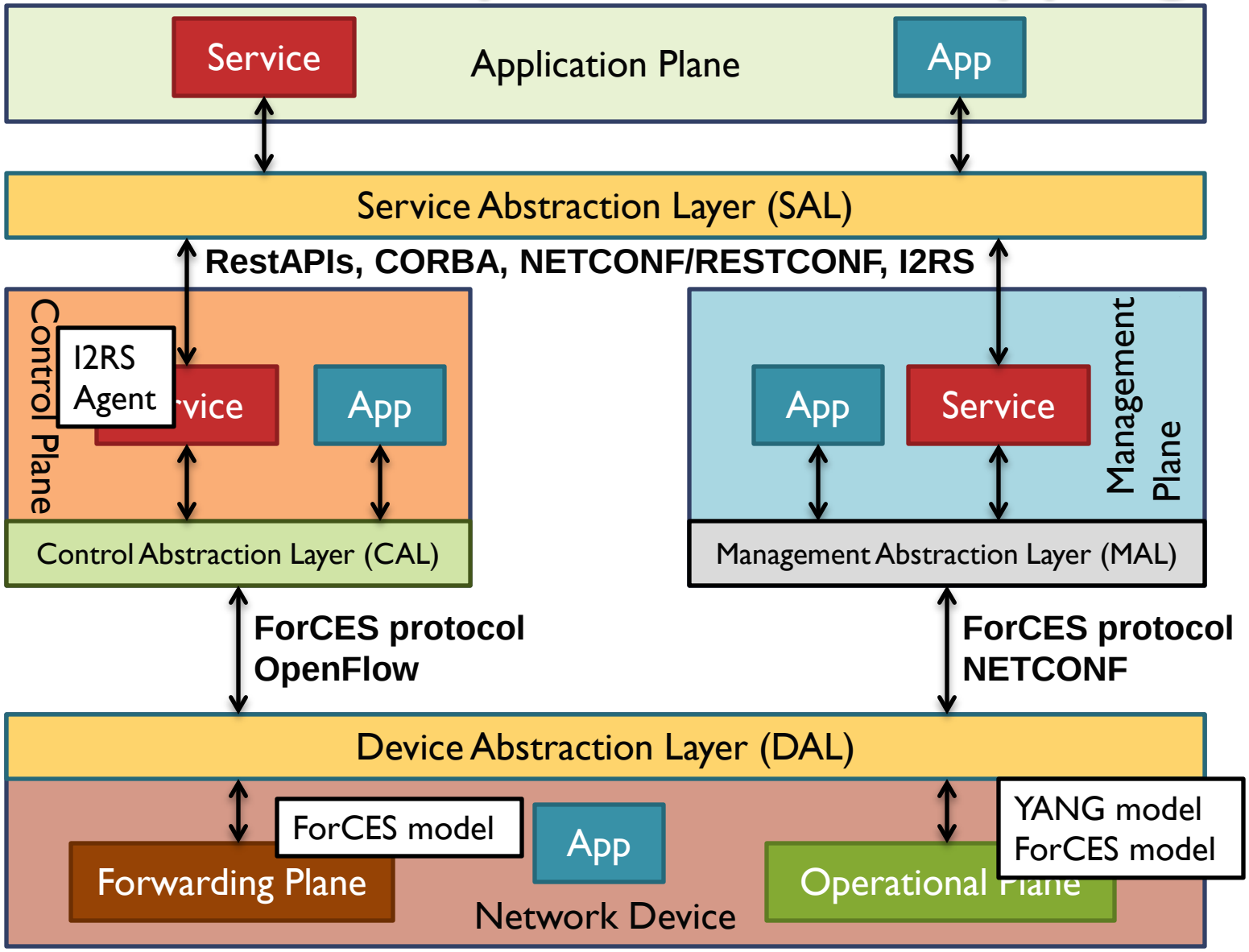
Reference Layer Model



Current Draft

- Maps few frameworks to reference layer model as proof-of-concept
  - ForCES
  - NETCONF
  - I2RS
  - OpenFlow

Reference Layer Model Mapping



Moving Forward

- Comments / Feedback
  - Thanks to David Meyer, Salvatore Loreto and Sudhir Modali
  - Looking forward to your comments!
- Care to suggest text and join the effort?
  - map your framework and provide us with details/comments
- Request this document to be adopted as an RG document