

# **SAM: Service Automation Management Architecture**

draft-wang-l3sm-service-automation-architecture-01

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*IETF 94@Yokohama, Nov 2015*

# Requirements from Service Provider and efforts in IETF

- Uniform interface to various user Applications that make demand on the network
- Rapid deployment of various services
- Network wide commitment
- Fault tolerant and roll-back
- Manage network devices from multi-vendor

Requirements from Service Provider

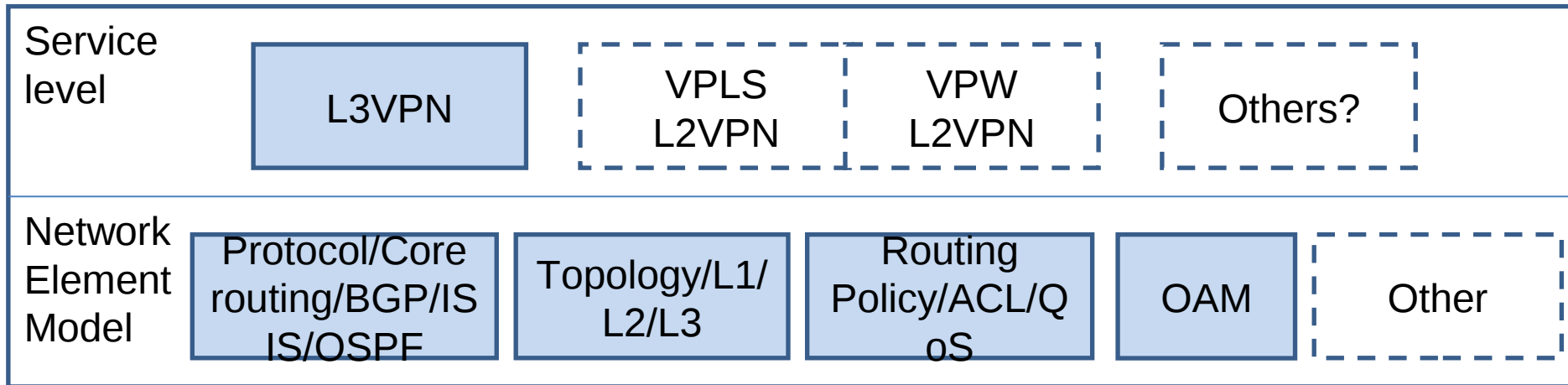
- Network Service Model
- NETCONF
- Network Element Model

Efforts in IETF

But, how to deploy them in the real network?

What's its relationship with other management systems?

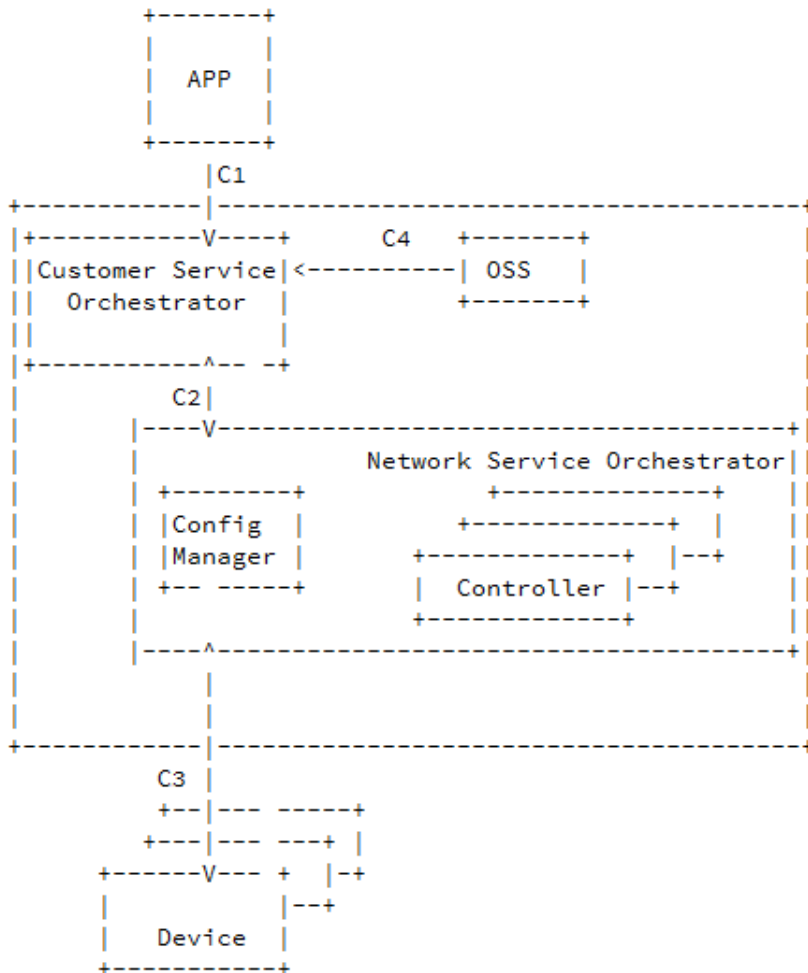
# Current Model Status in IETF



1. RFC6244 “An Architecture for Network Management Using NETCONF and YANG” describes only the usage and example of device model
2. Draft “YANG model classification” defines only the layered model structure, the general relationship among standard/extension/proprietary YANG model.
3. Draft “L3 vpn service model” provide one usage example of service data model

No draft discusses the service automation architecture that based on network service/network element YANG model

# Proposed Architecture



Service Automation Architecture

## CSO(Customer Service Orchestrator):

- 1.collect customer requirement using Service model
- 2.Get information from OSS
- 3.Translate Service Model parameters to Network Element configuration parameters

## NSO(Network Service Orchestrator):

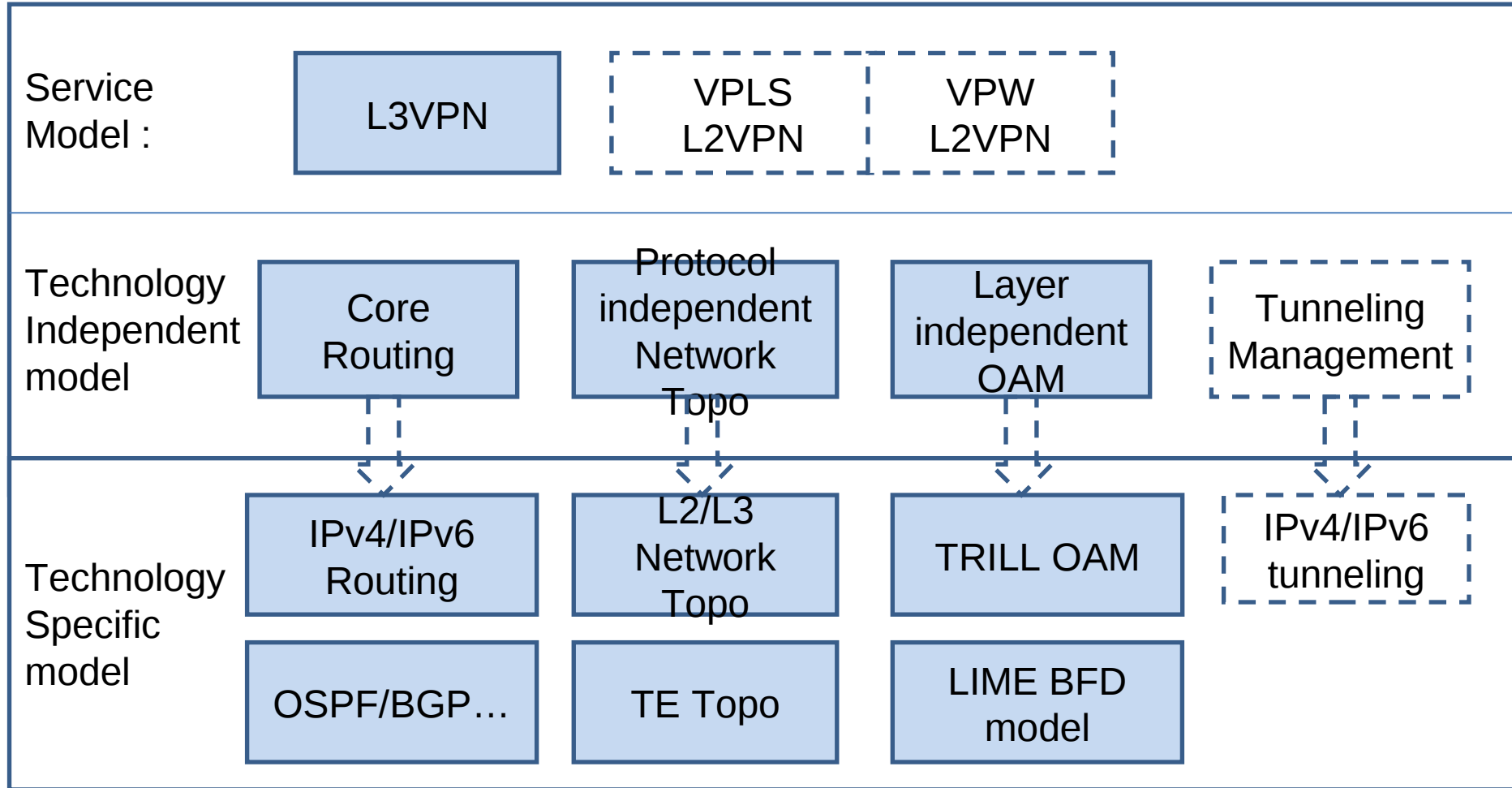
- 1.control, operate, and manage a network as a whole
- 2.Get orchestrated configuration of network element from CSO
- 3.These configuration can be specified in some abstracted way.
- 4.Adaption for multi-vendor/multi-protocol environment

## Interfaces:

- 1.C1: Restconf/YANG Model
- 2.C2: Restful/ proprietary API
- 3.C3: Netconf/SNMP/CLI/OF
- 4.C4: Restful/ proprietary API

How to define the C2 interface between CSO and NSO?

# Proposed Model Layering



Network Element model can be further broken down into technology independent model And Technology specific model.

# Next Steps

- Feedbacks are welcomed
  - Especially from ISP perspective
  - Also from vendor perspective
- A useful work? Possibly added to the charter?

# Comments?

Thank you!

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