Update on VPN-related YANG Modules

draft-ietf-opsawg-l3sm-l3nm

draft-ietf-opsawg-l2nm

draft-bgbw-opsawg-vpn-common

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OPSAWG

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Objectives for preparing draft-ietf-opsawg-l3sm-l3nm-04

- Goal#1: Address the comments received from implementers in opsawg mailing list

- Goal#2: Address the yang doctors review

- Goal#3: Shorten the list of open issues available at: https://github.com/IETF-OPSAWG-WG/l3nm/issues

# A Layer 2/3 VPN Common YANG Model to address Goal#1 and Goal#2

The Issue

- ## VPN-related modules

  – Layer 2 VPN Service Model: RFC8466

  – Layer 3 VPN Service Model: RFC8299

  – Layer 2 VPN Network Model: I-D.ietf-opsawg-l2nm

  – Layer 3 VPN Network Model: I-D.ietf-opsawg-l3sm-l3nm

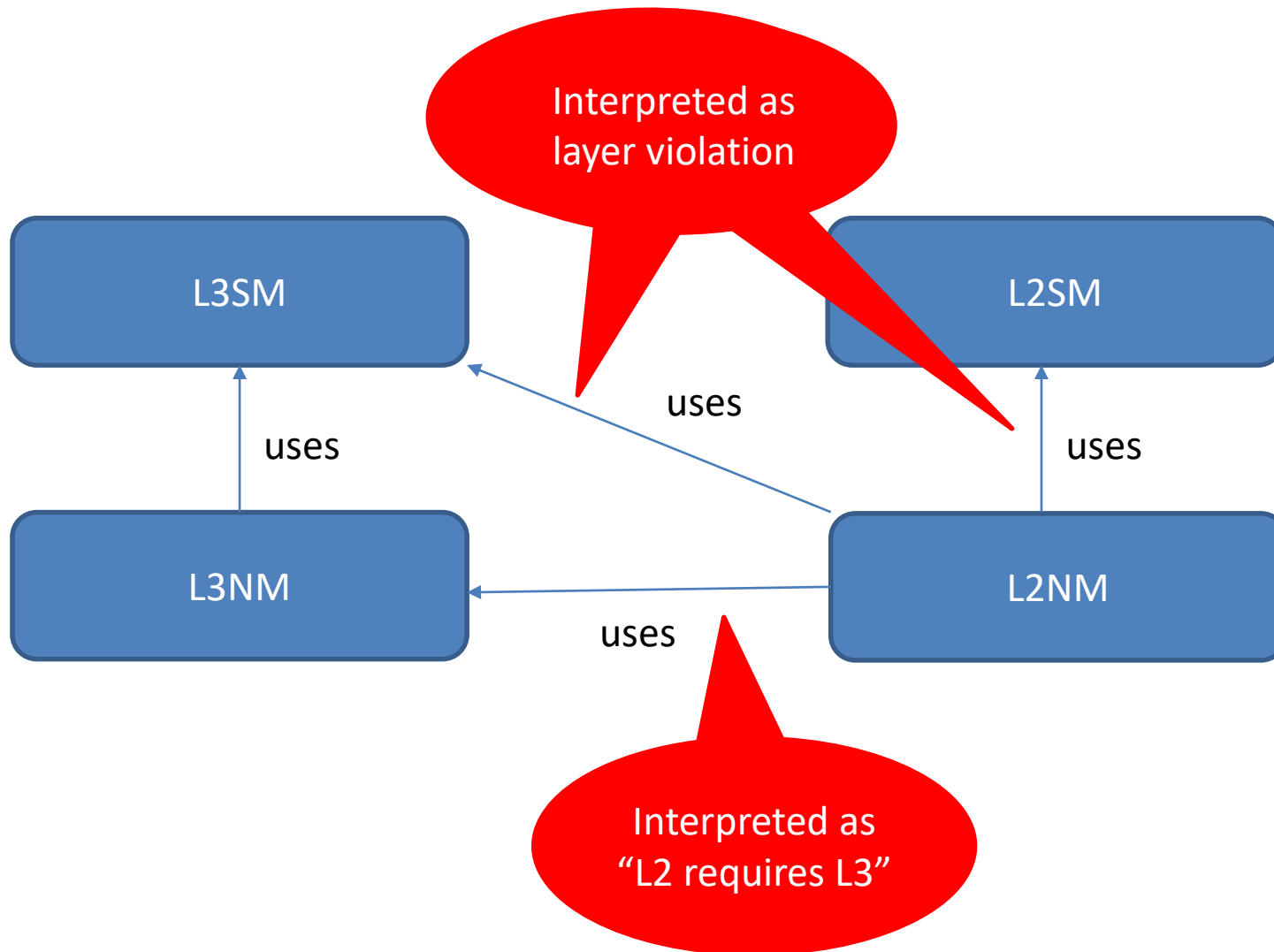 – VPN Service Performance Monitoring: I-D. www-opsawg-yang-vpn-service-pm

Observation: Many Common Data Nodes
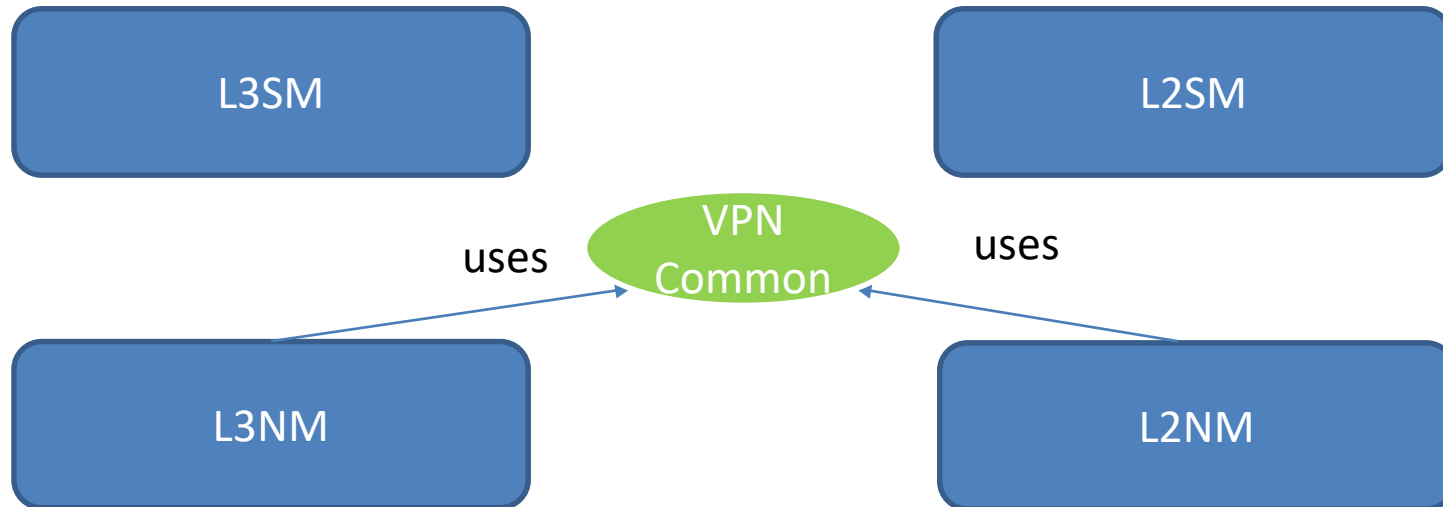
Issue: How to reuse data among these modules?
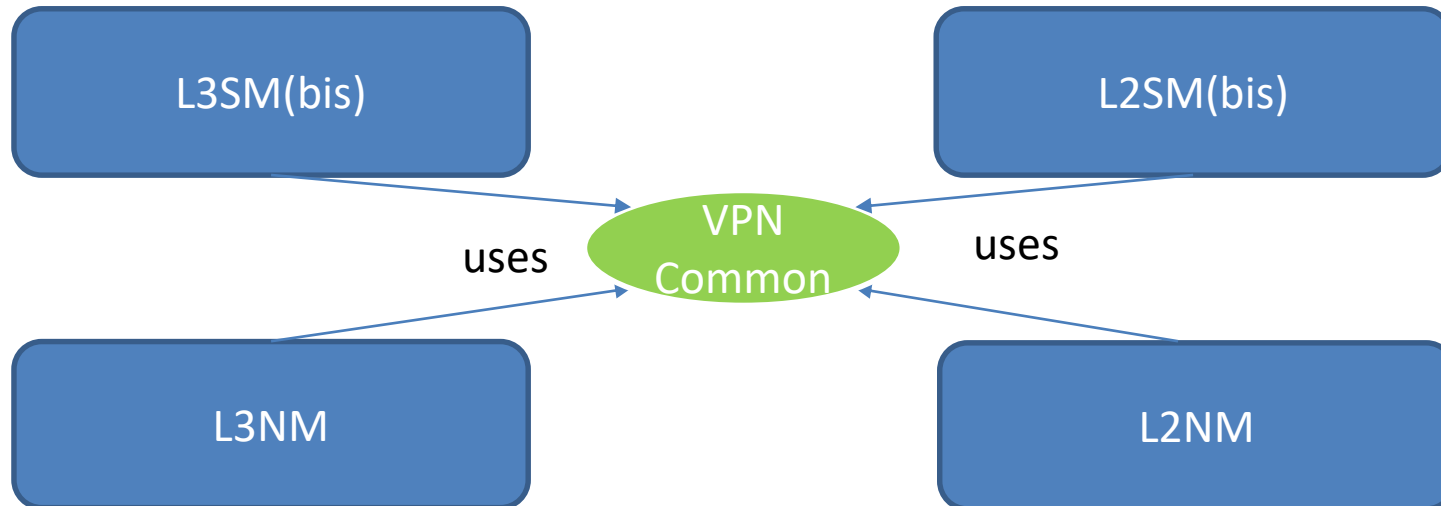
Reusable Types and Groupings:
A First Attempt
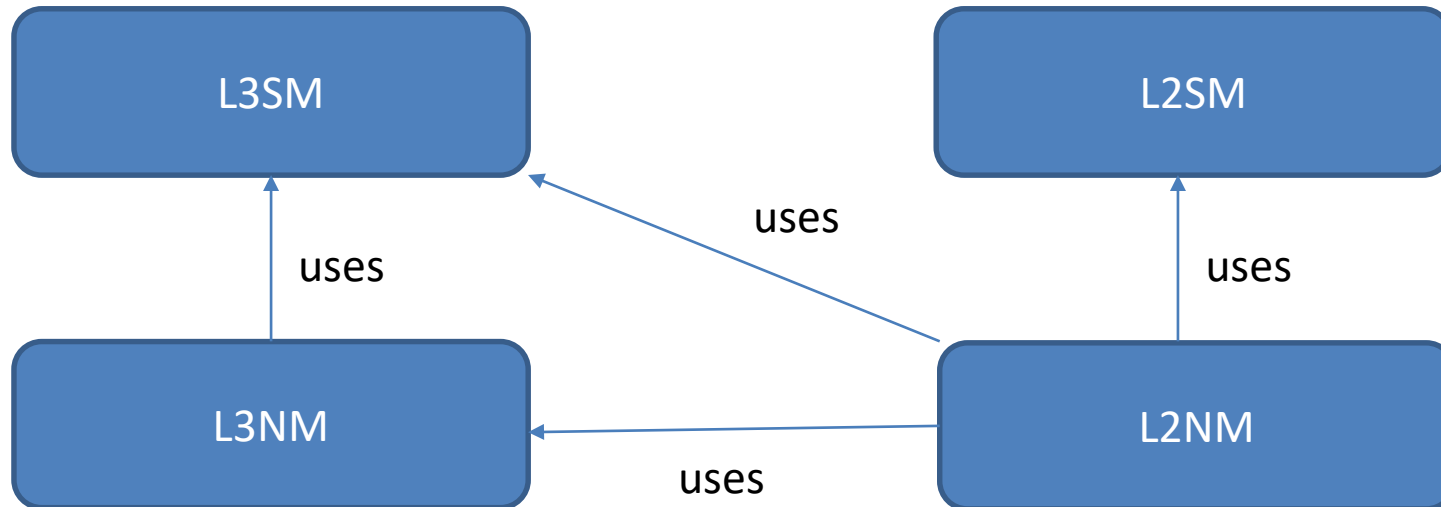
Reusable Types and Groupings: ~~A First Attempt~~ Abandoned

Reusable Types and Groupings: VPN Common Module

Reusable Types and Groupings: VPN Common Module

Clear Scope

- Approach
  - Extract data nodes that are common for both L3NM and L3SM
  - These data nodes are then filtered out against Layer 2 modules

- Check
  - All the common groupings are called in the L3NM module

What's Next for draft-bgbw-opsawg-vpn-common?

- Request the WG to endorse this approach: Common module

- Any objection?
  - If none,
    - Should this effort be published as a standalone document or should it be included in the L3NM draft?

- Thoughts?

Restructure the L3NM Module to address Goal#2

Model Structure After Yang doctors Review

STATS				
BEFORE		AFTER		
Features	8	Features	7	
Groupings	35	Groupings	2	
Typedefs	5	Typedefs	1	
Uses	3	Uses	21	
Imports	6	Imports	4	
Identityrefs	17	Identityrefs	31	

- Many changes were also made to the draft: references, description clauses, etc.
- The VPN Common can assume some of the groupings of l3vpn-ntw.

VPN COMMON	
STATS	
Features	18
Groupings	8
Typedefs	2
Imports	3

Goal#3
(solve open issues)

Issues https://github.com/IETF-OPSAWG-WG/l3nm/issues closed:>**2020-03-01**
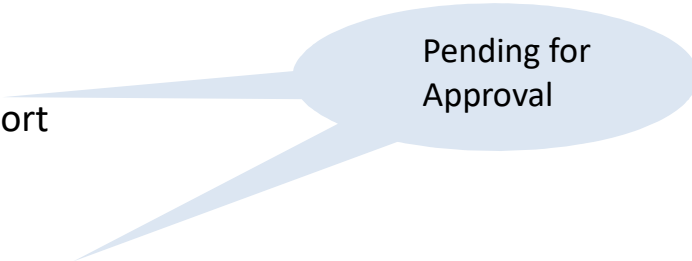
Total number of issues closed during the last period: **16**

- RD/RT auto-assignment semantic
- Yang Doctor review
  - NMDA compliance Reference
  - Coherence in file name revision
  - Groupings cleanup
  - usability of appendix A.
- Single key in the VPN-node
- Routing policy: learfer or just a string to hook?
- Routing policy vs forwarding policy
- …

- Full report in mailing list

Issues https://github.com/IETF-OPSAWG-WG/l3nm/issues is:**open**

Total number of issues open are: 16

- – Initial set of comments for *ietf-vpn-common*
- – **IP connection**: Simplify the address assignment structure
- – Need service type identification
- – Descriptions and Normative references
- – Complementary BGP session parameters support
- – …

Pending for Approval

Pull requests   https://github.com/IETF-OPSAWG-WG/l3nm/pulls

Total number of pull requests for review are: 9

- – Text for I-D related contributions 5
- – Issue-closing contributions 4

RD/RT Autoassigment Semantics

- ## Requirement to support four possible behaviors

  - RD/RT assigned directly
  - RD/RT assigned automatically by the controller
  - RD/RT assigned automatically based on a pool name available on the controller.
  - No RD/RT assigned.

FROM   TO

```
leaf rd {
   type union {
      type rt-types:route-distinguisher;
      type empty;
    }
}
```

```
choice rd-choice {
        case directly-assigned {---}
        case pool-assigned {---}
        case full-autoasigned {---}
        case no-rd {---}
```

EXPLICIT SOLUTION
EASY TO IMPLEMENT

Next Steps

- Release -04 version which will address both implementers and yandgoctors reviews
  - Including the common module issue

- Resolve any remaining issues in -05
  - Candidate for a WGLC in October

- Reviews and comments are welcome