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

L3SM

uses

L3NM

uses

L2NM

uses

L2SM

uses
Reusable Types and Groupings: A First Attempt Abandoned

- L3SM
- L3NM
- L2SM
- L2NM

Interpreted as layer violation

Interpreted as “L2 requires L3”
Reusable Types and Groupings: VPN Common Module

L3SM

VPN Common

uses

L3NM

uses

L2SM

L2NM
Reusable Types and Groupings: VPN Common Module

L3SM(bis) uses VPN Common

VPN Common uses L2SM(bis)

L3NM uses VPN Common

VPN Common uses L2NM
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
Many changes were also made to the draft: references, description clauses, etc.

The VPN Common can assume some of the groupings of l3vpn-ntw.
Goal#3
(solve open issues)
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](https://github.com/IETF-OPSAWG-WG/l3nm/issues) closed: > **2020-03-01**
Issues https://github.com/IETF-OPSAWG-WG/I3nm/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
– ...

Pull requests https://github.com/IETF-OPSAWG-WG/I3nm/pulls

Total number of pull requests for review are: 9

– Text for I-D related contributions 5
– Issue-closing contributions 4
RD/RT Autoassignment 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.

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

choice rd-choice {
  case directly-assigned {---}
  case pool-assigned {---}
  case full-autoassigned {---}
  case no-rt {---}
}

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