

802.1AXdz  
YANG for Link Aggregation:  
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Version 1

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# 802.1AXdz status

- AXdz-d0.2 went to Working Group ballot on November 21, 2024 through December 21, 2024.
- Ballot results:
  - 14 yes; 2 no; 25 abstain (ballot passes).
  - 40 comments from 8 commenters.
- Preliminary disposition:
  - [802-1AXdz-d1-0-pdis-v01.pdf](#)

# Discussion Topics

- Leafs with type binary:
  - Digests: 11, 9, 15, 16
  - Masks: 39, 10, 12, 13
- Defaults in description statements: 24
- Revision statements: 3
- Double-quote mark: 18
- Interface type "ieee8021axLag"?: 38
- Move actor-admin-state: 36
- Actor-admin-state defaults: 37
- Generalize port-algorithm: 40

# Leafs with type binary (base64)

- MD5 digests

1. linkagg/key-group/cscd/admin-conv-service-digest
2. linkagg/key-group/cscd/admin-conv-link-digest
3. lag/cscd/partner-conv-service-digest
4. lag/cscd/partner-conv-link-digest
5. drni/home-admin-conv-service-digest
6. drni/neighbor/aggregator-conv-service-digest
7. drni/neighbor/aggregator-conv-link-digest
8. drni/neighbor/gateway-conv-service-digest

Decide between binary and hex-string. Latter is more readable. Former is used for MD5 digest in mstp YANG.

- 4096 bit masks

1. aggport/cscd/oper-conversation-passes
2. aggport/cscd/oper-conversation-collected
3. drni/gateway-relay/home-aggregator-mask
4. drni/gateway-relay/home-gateway-mask
5. drni/gateway-relay/neighbor-aggregator-mask
6. drni/gateway-relay/neighbor-gateway-mask
7. drni/gateway-enable-mask (rw)
8. drni/gateway-preference-mask (rw)
9. drni/gateway-available-mask
10. drni/neighbor/gateway-preference-mask
11. drni/neighbor/gateway-available-mask

Remove because calculated from other info available in the data model

Use drni-mask grouping which allows a more condensed representation in common cases. When still use a mask, decide between binary and hex-string.

# MD5 Digests

- 16 octets in length
- Hex string has 32 characters
  - ietf-yang-types:hex-string type
    - separates octets with “:” which increases size to 47 characters
    - accepts upper or lower case for a-f|A-F, but says lower case is canonical
  - NULL = zero =  
00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
- Base64 has 24 characters
  - NULL = zero =  
AAAAAAAAAAAAAAAAAAAAAAAAAA==

# 4096 bit masks

- 512 octets in length
  - Think of it as a bit per VLAN-ID
- Hex string has 1024 characters
  - ietf-yang-types:hex-string type
    - separates octets with ":" which increases size to 1535 characters
    - accepts upper or lower case, but says lower case is canonical
  - Define a new hex string pattern?
    - E.g. "[0-9a-fA-F]{1024}" or "[0-9a-fA-F]{32}(-[0-9a-fA-F]{32}){31}"
- Base64 has 684 characters
  - Default (for masks that are config true) is all ones, which encodes to 680 "/" characters followed by "//8=":
    - ////////// ... //8=

# Making the masks more manageable

- The drni-mask grouping provides three choices for specifying the mask:
  1. Pattern: pre-defined bit pattern
    - Examples: “all-ones”, “even-odd”
    - Can be augmented with new identity statements
  2. CID-list: list of CIDs with a “1” in the mask
    - Good when the mask is sparsely filled
  3. Mask: specify the full 4096 bit mask
    - Worst case, but covers all possibilities

# Next steps

- Working Group recirculation



Back up slides

# Effect of Activity flags in the admin port states when Sonny connects to Cher

		Actor_Admin.Activity : Partner_Admin.Activity			
		1 : 1	1 : 0	0 : 0	0 : 1
Actor_Admin.Activity : Partner_Admin.Activity	1 : 1	Both sing (Both transmit LACPDUs)	Both sing	Cher sings. Sonny sings when hears Cher.	Both sing
	1 : 0	Both sing	Both sing	Cher sings. Sonny sings when hears Cher.	Both sing
	0 : 0	Sonny sings. Cher sings when hears Sonny.	Sonny sings. Cher sings when hears Sonny.	Neither sing	Sonny sings
	0 : 1	Both sing	Both sing	Cher sings	Both sing, then both stop when hear the other. Timeout and repeat.



Thank You