

# **IDR Status**

# **IETF-120**

07/22/2024



# Note Well

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Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

- [BCP 9](#) (Internet Standards Process)
- [BCP 25](#) (Working Group processes)
- [BCP 25](#) (Anti-Harassment Procedures)
- [BCP 54](#) (Code of Conduct)
- [BCP 78](#) (Copyright)
- [BCP 79](#) (Patents, Participation)
- <https://www.ietf.org/privacy-policy/>(Privacy Policy)

# Agenda (1)

0. Agenda bashing and Chairs' Slides (10 mins) [Chairs]
1. BGP FSM Discussion (10 mins) [Chairs]
2. BGP BFD Strict-Mode (10 mins)  
draft-ietf-idr-bgp-bfd-strict-mode-13 [Jeff Haas]
3. BGP over QUIC (15 mins)  
draft-retana-idr-bgp-quic-05 [Jeff Haas/Yingzhen Qu]
4. Accumulated Metric in NHC attribute (10 mins)  
draft-ssangli-idr-bgp-generic-metric-00 [Srihari R. Sangli]
5. BGP Extension for 5G Edge Service Metadata (5 mins)  
draft-ietf-idr-5g-edge-service-metadata-21 [Linda Dunbar]
6. BGP Extensions of SR Policy for Composite Candidate Path (5 mins)  
draft-jiang-idr-sr-policy-composite-path-00 [Changwang Lin/Ran Chen]



# Agenda (2)

7. BGP SR Policy Extensions for Weight Time Range (5 mins)  
draft-yang-idr-sr-policy-weight-timerange-00 [Feng Yang]
8. Extension of Link Bandwidth Extended Community (5 mins)  
draft-li-idr-link-bandwidth-ext-02 [Wenyan Li]
9. BGP Link Bandwidth Extended Community (5 mins)  
draft-ietf-idr-bgp-link-bandwidth-07 [Reshma Das]
10. Distribute Service Metric By BGP (10 mins)  
draft-lin-idr-distribute-service-metric-02 [Chanwang Lin]
11. BGP Extension for Tunnel Egress Point (10 mins)  
draft-hcl-idr-extend-tunnel-egress-point-00 [PengFei Huo]

# Chair Topics

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- Document status  
(<https://wiki.ietf.org/group/idr/idr-draft-status>)
- Early Allocation Status
- FSv2 Interims

# IETF LC + Awaiting AD

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## IETF LC

- draft-ietf-idr-bgp-sendholdtimer-13 (ends 7/27/2024)

## Awaiting AD Review

1. draft-ietf-idr-ts-flowspec-srv6-policy-03 (318 days) – needs revision
2. draft-ietf-idr-bgp-car (87 days)
3. draft-ietf-idr-bgp-ct (87 days)
4. draft-ietf-idr-cpr (1 day)

# Holding in Shepherd's queue

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## **Awaiting Shepherd's review**

1. draft-ietf-idr-sdwan-edge-discovery-13 –  
(PS, in Shepherd review, awaiting review 47 days)

## **Awaiting Revision from Authors**

2. draft-ietf-idr-sr-policy-safi-04  
(PS, revision -05 posted on 7/22, shepherd review in process)
3. draft-ietf-idr-bgp-sr-segtypes-ext-03  
(PS, awaiting draft-ietf-idr-sr-policy-safi)

## **Awaiting Spring WG Adoption**

4. draft-ietf-idr-ct-srv6  
(on draft-salih-spring-srv6-inter-domain-sids-05, awaiting 87 days)

## WG LC Pending

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1. draft-ietf-idr-vpn-prefix-orf-07 (Keyur) – 07 posted (7/22), shepherd review in process
2. draft-ietf-idr-rt-derived-community (Jie) – Review pending
3. draft-ietf-idr-bgp-fsm-iana (Sue) – IETF 120 discussion
4. draft-ietf-idr-bgp-bfd-strict-13 (Sue) – IETF 120 discussion
5. draft-ietf-idr-bgp-ls-sr-policy-05 (Sue) – 05 posted (7/22), Pre-WG LC shepherd review in process



# WG Adoption

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## Adoptions Ending on 7/26

1. draft-hares-idr-fsv2-ip-basic-02 (6/1 to 6/15, IETF-120 discuss)
2. draft-ssangli-idr-bgp-generic-metric-00 (7/6 to 7/22)
3. draft-peng-idr-segment-routing-te-policy-attr (7/12 to 7/26)

## New Approach to Adoptions

- Group Adoptions into categories

**BGP-LS/SR, FSv1/v2, BGP Base (FSM, QUIC, BFD), New Attributes, V4/v6, New Communities**

- Target Interim + IETFs - to giving Pre-Adoption review

# Pending WG Adoption for BGP-LS/SR

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## New Approach – Interim on BGP-LS/SR with action items

1. draft-lin-idr-sr-policy-headend-behavior –  
Needs 04.txt that introduces focus of draft and why H.Encaps.A is useful
2. draft-lin-idr-sr-epe-over-l2bundle-06  
awaits 07 with resolution to looping of bum traffic
3. draft-chen-idr-bgp-ls-sr-policy-nrp-09 – (posted 7/22)  
-09 adds links to spring work + NRP-ID, **adoption starting today**
4. draft-zhang-idr-sr-policy-template-03 –  
needs architectural work in Spring + PCE alignment

## Pending Adoptions – Chair review pending

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- draft-geng-idr-bgp-savnet
- draft-uttaro-idr-bgp-oad
- draft-abraitis-idr-addpath-path-limits
- draft-wang-idr-next-next-hop-nodes
- draft-mishra-idr-v4-island-v6-core-4pe – on hold for new draft

# Early Allocations

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- draft-ietf-idr-bgpls-inter-as-topology-16 – AD needs to review
- draft-ietf-idr-5G-edge-ervice-metadata-22 – review + send to designated experts

## **Holding on draft-ietf-idr-sr-policy-safi publication Approval**

- draft-ietf-idr-sr-policy-path-segment
- draft-ietf-idr-sr-policy-seglist-id
- Draft-ietf-idr-sr-policy-metric

# FSv2 – Goals

## Team 1: Basic IP FSv2:

Set minimal subset – V1 (actions + Filters) + User order

## Team 2: Add of New IP Filters + Filter Chains

Filter Chain = dependency between filters

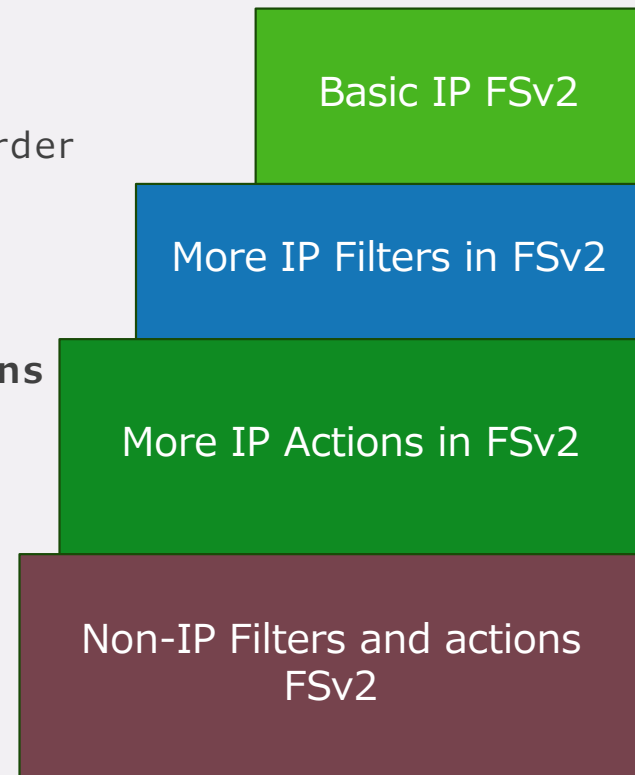
## Team 3: New actions with User order + Action chains

- Form: Ext. Community + Wide Community

Action chain = dependency between Actions

## Team 4: Non-IP filters and actions FSv2


- “Plug-in” for non-IP filters: L2, MPLS, SFC, Tunnel
- Filters + actions – User ordered + Chains



# FSv2 Split

**draft-ietf-idr-flowspec-v2** – remains WG document with summary

## Split to:

- **draft-ietf-hares-fsv2-ip-basic – (Team 1) minimal subset**   
FSv1 + User order on v1 Filters
- **draft-ietf-hares-fsv2-more-ip-filters (Team 2)**  
*Extended IP filters TLV + filter chains + template for Individual Drafts*
- **draft-ietf-hares-fsv2-more-ip-actions (Team 3)**  
*Format for Actions: Ext Community + Wide Community Action formats*  
*Description of Action chains (default + user ordered + failure issues)*  
*Template for specifying new actions in individual drafts*
- **draft-ietf-hares-fsv2-non-IP (Team 4)**  
*Any additional Common header requirements + Templates*
- **Individual drafts (TTL, MPLS, SID) – will be generated as WG drafts**

# What about I-Ds proposing Flow Specification (FSv2)

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## FSv1 WG drafts + IDs

- If deployed, need two drafts – FSv1 + FSv2
- If not deployed – use FSv2 templates

## FSv2 IDs

- Use v2 templates – for filters + actions

# FSv2 IP Filters Drafts Pending –Team 2

## WG + ID – on Filters in packets

- draft-ietf-idr-flowspec-srv6 (SID in IPv6 SRH)
- draft-lin-idr-cats-flowspec-ts- – CAT-ID in IPv6 header (TBD)
- draft-peng-idr-apn-bgp-flowspec – APN ID in IPv6 header (TBD)
- draft-dmc-idr-flowspec-tn-aware-mobility- UDP filters in 5G
- draft-cui-idr-content-filter-flowspec – Flexible IP Header + IP Payload

## Packet filters + Associated Information

- draft-ietf-idr-flowspec-interfaceset- – filters + interface group + AS
- draft-ietf-idr-ts-flowspec-srv6-policy- filters + Color + tunnel Interface
- draft-wang-idr-flowspec-dip-origin-as-filter – filters + origin-AS
- draft-geng-idr-flowspec-sav – filters + interface group
- draft-peng-idr-apn-bgp-flowspec – filters + group + subgroup
- draft-zzd-idr-flowspec-path-scheduling – filters + time



## FSv2 Action Drafts pending (Team 3)

| Draft   | redirect     | Seq | copy | mark   | Pkt           |
|---|--------------|-----|------|--------|---------------|
| draft-ietf-idr-flowspec-redirect-ip             | IPv4/v6      |     | X    |        |               |
| draft-ietf-idr-flowspec-path-redirect           | V4 to GID    | X   | X    |        |               |
| draft-ietf0-idr-srv6-flowspec-path-redirect     | V6 to GID    | X   | X    |        |               |
| draft-ietf-idr-ts-flowspec-srv6-policy          | SID Tunnel   |     |      |        |               |
| draft-ietf-idr-flowspec-network-slice-ts        |              |     |      | nrp-id | Encap         |
| draft-dmc-idr-flowspec-tn-aware-mobility        | IPSec tunnel |     |      |        |               |
| draft-lin-idr-cats-flowspec-ts                  |              |     |      | cat-id |               |
| draft-shen-idr-flowspec-traffic-compress-action |              |     |      |        | Compress      |
| draft-peng-idr-apn-bgp-flowspec                 |              |     |      | apn-id | Sitch inherit |

## Filters + Actions for Non-IP (team 4)

| Draft                                  | Filter                  | mark                                   | Actions                          |
|--|-------------------------|--|----------------------------------|
| draft-ietf-idr-flowspec-v2             | MPLS label<br>EXP bits  |  | Push/pop/ swap<br>labels         |
| RFC9015                                | IP                      |  | SFC classifier<br>(SPI, SI, SPT) |
| draft-ietf-idr-flowspec-l2vpn          | L2 header<br>(15 items) | Rewrite VLAN<br>ID (inner or<br>outer) | Push/pop/ swap<br>VLAN action    |
|  |                         |  | TPID action                      |
| draft-ietf-idr-ts-flowspec-srv6-policy | SID Tunnel              |  |                                  |
| draft-ietf-idr-flowspec-nv03           | VLAN, GRE,<br>L2TP      | DSCP (outer)                           | None                             |
| draft-xiong-idr-detnet-flow-mapping    | MAC + TSN<br>info       | Set latency<br>TSN / Profile           | Map flow to TSN<br>stream (L2)   |

# New Idea:

## L3 Components as Firewall Rules

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### L3 Filters – L3 Packet field

- header IPv4 or IPv6
- Payload

### Linked data

- smaller area in Firewalls
- Search packet + linked data

L3 packet  
Field

Linked  
Data

IPv4 Header  
IPv6 Header  
Payload

Interface  
Group of Interfaces  
Color(s)  
Time(s)  
AS or Group of Ases  
Logical Group/Subgroup

### FSv1 IP Component Numbers

- 1 - IP Destination prefix
- 2 - IP Source prefix
- 3 - IPv4 Protocol / IPv6 Upper Layer Protocol
- 4 - Port
- 5 - Destination Port
- 6 - Source Port
- 7 - ICMPv4 type / ICMPv6 type
- 8 - ICMPv4 code / ICPv6 code
- 9 - TCP Flags
- 10 - Packet length
- 11 - DSCP
- 12 - Fragment
- 13 - Flow Label

**Component IDs:**  
global or local  
to type

### L3 Components (default order)

- 14 - TTL
- 15 - SID in IPv6 Routing header
- 16 - NRP in Hop-by-Hop IPv6 header
- 17 - CAT ID (IPv6 header (?))
- 30 - Payload

### Linked data Components (151- 180)

- 151 interface or interface group
- 152 Color
- 153 Time (or times)
- 154 AS or Set of Ases
- 155 Group and Sub-group

### MPLS Component Numbers [1-2 or 64-65]

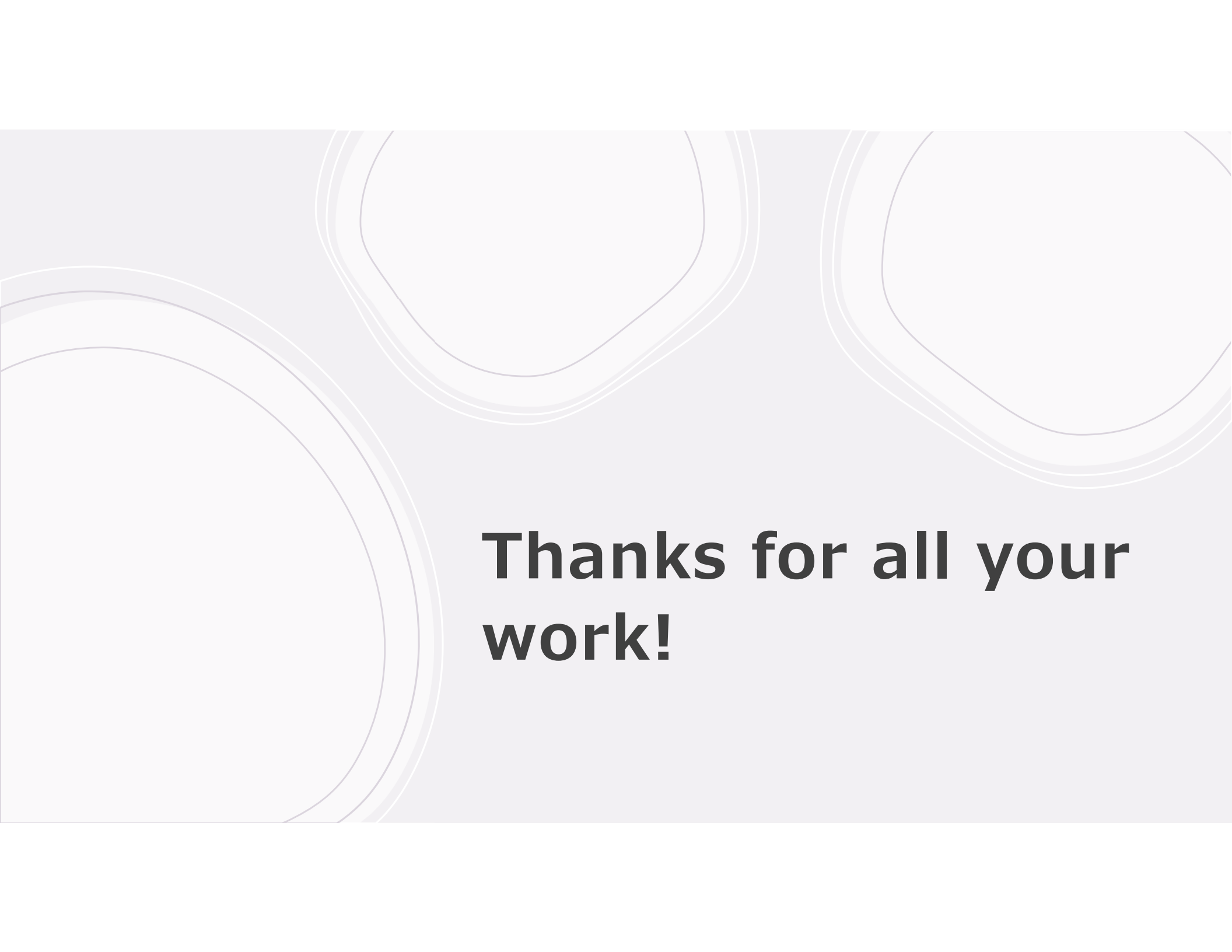
- 01 (64) MPLS Label Match-1 (label)
- 02 (65) MPLS Label Match-2 (Exp bits)

### L2 Component Numbers [1-15 or 81-98]

- |                          |                           |
|--------------------------|---------------------------|
| 1 - Ethernet type        | 10 - Inner VLAN ID        |
| 2 - Source MAC           | 11 - Inner VLAN PCP       |
| 3 - Destination MAC      | 12 - VLAN DEI             |
| 4 - DSAP in LLC          | 13 - Inner VLAN DEI       |
| 5 - SSAP in LLC          | 14 - Src Mac Special bits |
| 6 - control field in LLC | 15 - Dst Mac Special bits |
| 7 - SNAP                 | 16 - RSN Mac Data unit    |
| 8 - VPAN ID              | 17 - Det. Latency Info    |
| 9 - VLAN PCP             |                           |

### Tunnel Component Numbers [1-11 or 131-142]

- 01 - VN ID
- 04 - Cookie
- 05 - Tunnel header flags
- 06 - L2TP control version
- 07 - L2TPv3 Control Connection ID
- 08 - L2TPv3 Ns
- 09 - L2TPv3 Nr
- 10 - Protocol type
- 11 - GRE Sequence



**Thanks for all your  
work!**