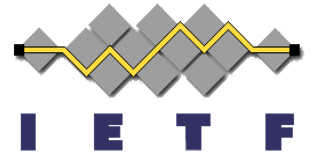


LSVR

(Link State Vector Routing)

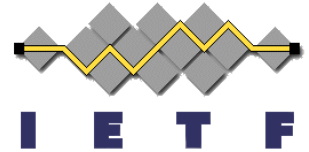
Gunter Van de Velde
Victor Kuarsingh



IETF 102, 18 July 2018
Montreal

Administrivia

- Chairs:
 - Gunter Van de Velde
 - Victor Kuarsingh
- Jabber Scribe:
 - lsvr@ietf.jabber.org
- Minutes:
 - <http://tools.ietf.org/wg/lsvr/minutes>
- Note Well.
- Blue Sheets.
- Agenda Bashing.



Note Well

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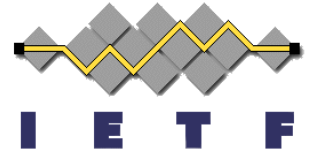
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- The IESG, or any member thereof on behalf of the IESG
- Any IETF mailing list, including the IETF list itself, any working group or design team list, or any other list functioning under IETF auspices
- Any IETF working group or portion thereof
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- The IAB or any member thereof on behalf of the IAB
- The RFC Editor or the Internet-Drafts function

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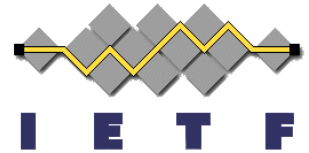


Blue Sheets

- Please fill these in
- The secretariat makes grumpy-face if we don't.

Agenda

- Administrivia and agenda bashing (5 min)
 - Chairs
- Welcome to LSVR
 - Intro to LSVR & Charter (Chairs) (20 min)
- Shortest Path Routing Extensions for BGP Protocol
 - ([draft-keyupate-lsvr-bgp-spf-00](#)) (Keyur) (40 min)
- Usage and Applicability of Link State Vector Routing in Data Centers
 - ([draft-keyupate-lsvr-applicability-00](#)) (Acee) (20 min)
- Link State Over Ethernet
 - ([draft-ymbk-lsvr-lsoe-00](#)) (Randy Bush) (20 min)
- Closing and next steps (Chairs) (15 min)



LSVR Charter review

- LSVR is chartered to develop a hybrid routing protocol for Data Centers
- Hybrid means that both path vector and link-state technology is used
 - LSVs describe a data-structure utilized to make routing decisions (i.e. used for SPF to calculate a routing table)
 - LSVs are distributed using path vector mechanisms (i.e. BGP based distribution)
 - Initial focus is to re-use BGP based IPv4/6 transport, packet formats and error handling consistent with BGP-LS NLRI encoding mechanisms (RFC7752)

LSVR Charter review

- The LSVR protocol WG focus
 - Standardization of protocol functionality
 - Defining Link-State Vectors (LSV)
 - Defining standard path-vector route selection using
 - Dijkstra SPF based algo, BGP-4 protocol mechanics and BGP-LS encoding
- The LSVR WG will closely collaborate with IDR WG
 - Any modifications or extension to BGP that will not be specifically constrained to be used by LSVR must be carried out in the IDR WG
 - Modifications may be done in LSVR after agreement with all the relevant chairs and the responsible Area Directors

LSVR Charter review

- LSVR is chartered to deliver following documents
 - Specification document describing LSV with standard Dijkstra SPF route/path selection (calculation) utilizing existing BGP protocol baseline functionality and BGP-LS packet encoding formats
 - Specification documenting protocol extensions required to efficiently reuse BGP to distribute LSVs within an IPv4/IPv6 DC with scope to include privacy and security considerations
 - The impact of these extensions to the security properties of BGP will be studied and documented
 - New attack vectors will be explored and documented
 - Mitigations to any new attack vectors identified will be discussed and documented
- Applicability Statement for the use of LSVR in the Datacenter
- YANG model specification for LSVR management

LSVR Milestones

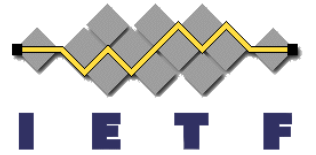
- March 2019
 - Applicability statement for LSVR in DCs
 - LSV distribution using BGP transport
 - LSVR with standard Dijkstra path selection
- July 2019
 - YANG specification for LSVR

Next Steps

- IETF101 – first stab at the LSVR deliverables
- Interim #1
- IETF102 (July 2018)
- Interim #2
- IETF103 (November 2018)
- Interim #3
- IETF104 (March 2019) – Milestone date

Agenda

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THANK YOU!