LSVR
(Link State Vector Routing)

Gunter Van de Velde
Victor Kuarsingh

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London
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.**
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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 (e.g. 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 WG
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
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- Closing and next steps remarks (Chairs) (15 min)
THANK YOU!