NVo3 WG meeting, IETF 89 @London

Meeting Minutes: Sam K. Aldrin

NVO3 WG meeting minutes, London, Monday March 3rd, 13:00-15:00

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Welcome (10 min)

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1. *Meeting Administrivia* (chairs, 10 min)
   (notes, blue sheets, agenda bash, charter status, work plan)
   - Priority is to get the documents completed and meet set milestones.
   - Sam Aldrin appointed as secretary.
   - No RFC's; one WG document in queue.
   - Framework document – a comment is posted; look into data-tracker for details.
   - Data plane requirements – Marc – Will be addressing the comments and a new rev will be posted.
   - All the requirements including DP requirements needs to be reviewed/addressed

Stewart	Framework is back with authors to resolve identified issues.

2. *Gap Analysis* (Eric Gray, 20 min)
   draft-ietf-nvo3-gap-analysis-00
   - This draft shows how control plane requirements are addressed.
   - Worked with LISP to take that into consideration
   - Other GAP analysis docs needed to map requirements.
   - Significant focus on push/pull was made in the document

Issues:
   - Will divide into L2 and L3 based requirements
   - Hope to use table footnotes to add references to RFC numbers, etc.

- Summary and conclusions were not completed yet
- Should we have operational requirements section or change it to OAM requirements doc? Or just use the OAM doc?

Next steps
- Get reviews complete
- Iterate with draft authors to get the documents to complete

Comments:

Lucy	We are very dependent on this doc for next steps. We see the document gets updated just before cut off date but still is not complete. How do you plan to speed up the process?
Benson	How the WG can help to speed up the process?
Lucy	I have already given feedback
Eric	Could reference draft-hertogs for ex:. Would like to see more contributions like draft-hertogs to be referenced in this doc
Lucy	Are you asking for new draft or just asking yes/no feedback?
Eric	For data plane, we already have. But for Control plane, we also need to know how it works. At least a draft
Lucy	Why is NVGRE referenced as L3 solution, in the current draft version?
Eric	It is possible to use for L2 and layer3.
Lucy	Which reference are you using for VXLAN and NVGRE control plane?
Eric	Draft just talks about it, but doesn't reference it.
Lucy	Last time I gave comments to use controller but now it says control plane. So, where does control plane solution come from? Neither VXLAN nor NVGRE is standard.
Benson	Things referenced in the document are not documented, lest standard.
Yves	Would like to see LISP as 6^{th} column.
Eric	LISP will not be as 6^{th} column but referenced to the doc.
Yves	Eventually control plane and data plane separation will happen. Hence, it is good to have LISP comparison.

Eric	These were the technologies. Added references to look into this and this.
Yves	It was mentioned in the mailing list but no status
Eric	We should discuss in the mailing list. Benson: We are over time, hence cutting the line.

3. *Architecture* (Design Team, 10 min)
   draft-ietf-nvo3-arch-01

   - Quick update on the status of arch.
   - Need reviews on what to add etc
   - Incorporate from the draft-ghanwani and draft-xia drafts?
   - We need to have a statement on what frames to carry and what shouldn't be.

Comments:

Lucy	Where to draw the line for things being added?
Thomas	Need to just add text/table to just reference or concise text. These architectures will be used in creating solution.
Stewart	What is suggested being carried over in these documents is being carried over PW for the past 10years
Lucy	In PW, two clients are connected but here it is different
Thomas	PW isn't a wire is almost wire.
Stewart	PW is used for VPLS and doesn't carry everything

4. *Security Requirements* (Dacheng, 10 min)
   draft-ietf-nvo3-security-requirements-02

   - Want to update the status since last WG session
   - Change the diagram of overlay architecture

- Changes to threat models: Inside, Outside and malicious tenant systems
- Clarify the tolerance of compromised NVA's is out of scope.
- Add requirements for NVA-NVA. Similar to NVE-NVA.
- Provide different keys to protect unicast control traffic.
- For multicast, should assign distinct keys.
- Added sec 6 for authentication and authorization.
- Removed support of AKMP.
- Provide list of issues not covered, like, algorithm agility, accountability etc.

Comments:

<name not heard>	Are you going to put requirements regarding attack on TS?
Dacheng	This is about control plane between hypervisor and NVE.
Benson	Take it to the list as it is complicated question and needs more discussion.

Next Steps (15 min)
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5. Next Steps Discussion (Chairs, 15 min)

Matthew Bocci:
- Had some questions regarding GAP, architecture document etc.
- Re-charter to adopt solutions or shutdown as no work to do.
- In order to move forward, control and data plane requirement documents needs to be completed.
- Please review and send in comments.
- Please provide input to GAP analysis and arch documents.
- NVo3 should able to adopt data and control plane solution documents, which do not have home elsewhere

Comments:

Loa	We have requirements, don't think shutdown is

	real question, instead co-operate with other WG to get it done.
Thomas	Are we going to entertain solutions? IMO, yes, as there is lot of confusion about whether anything will be considered or not. On GAP analysis, this is place when we first chartered. There is lot of work to be done in this area. Not sure how this could be resolved.
Benson	My personal opinion. I agree with the concern. Getting consensus is difficult as there are commercial deployments.
Thomas	With Geneve draft discussion, we need new requirements. Makes me wonder on this.
Marc	draft requirements like geneve, variable lengths are pretty generic. These are orthogonal to DP requirements.
Anton	Don't put donkey behind cart. Geneve should document requirements, not other way.
Marc	No discussion on metadata since last two years.
Fabio	Looking at what this WG has done and SFC has done, there is separation between encapsulation and metadata. From solutions perspective, look at the requirements and see if they are valid or not. We can still keep the separation and make it work.

Other Drafts (55 min)

*** Solution drafts will be presented to help the Gap Analysis or other WG drafts.
*** None can be adopted currently. Speakers should focus on impact on WG drafts.

6. *NVO3 Fault Management* (Tissa Senevirathne, 10 min)
   draft-tissa-nvo3-oam-fm-00.txt
   - Will talk about highlights and see how it applies to NVo3 OAM requirements.
   - It is based on CFM, which is widely deployed and used, to manage overlay and underlay.
   - Adds one or two flags to indicate it is OAM packet.
   - OAM to perform end-end when there is translation

- MD level is one model to perform OAM function across layers and keep them separate.
- Need wider review of this document.
- Didn't find any analysis related on OAM in GAP analysis

Comments:

Eric	Very curious to know where you got the idea of hierarchical OAM?
Tissa	It is not hierarchical OAM. This is not to leak out the packets.
Eric	Then what is 96byte metadata?
Tissa	That is not the use of 96bytes
Pat	MD level is to used to perform only at that level.
Erik Nordmark	When we did the exercise at TRILL, we did end up with BFD and CFM. So, need to map BFD into this.
Tissa	One needs to look into the framework and not just encap.
Dave Allan	How the encap justifies its existence?
Tissa	96byte optional payload is only used when the domain is spanning across L2 to L3.

7. *Generic Overlay OAM and Datapath Failure Detection* (Kanwar Singh, 5 min)
draft-jain-nvo3-overlay-oam-01.txt

- Existing IP ping doesn't verify the overlay networks consistently
- OAM packet should exactly follow the dataplane packet
- Should be able to work with both L2 and L3.
- Proposing TLV encapsulation for future support
- Already published two drafts for router alert for VXLAN and NVGRE.

Benson	No time for questions as we are running short.

8. *Geneve: Generic Network Virtualization Encapsulation* (Pankaj Garg, 10 min)

draft-gross-geneve-00.txt

- Present problem and the limitations.
- There is lot to innovate in overlay network and virtualizations
- Lack of extensibility in data plane innovations
- There is no support for carrying metadata
- If we can carry metadata, we can really improve performance and security
- Some of the encapsulation formats limit control plane innovation
- Decouple of data plane and control plane
- Allow Data plane and Control Plane evolve at different pace
- There is need for extensibility
- Why we can't extend VXLAN etc. because it is not extensible and do not want to

Comments:

Anton	The requirements are not laid out. First lay it out then discuss.
Anton	I finished writing L2TPv3 with all the things you listed in the draft. The header doesn't change for a given session. None of the standard enables this at a faster rate.
Gross	Need to discuss requirements.
Lucy	Geneve method you proposed is merge of VXLAN and NVGRE?
Pankaj	Innovation is not in DP.
Benson	Take it on mailing list
Surendra	Why you want to tie transport and metadata?
Pankaj	We want to define general protocol for metadata
Dino	Extensible header means nothing. We already had in IPv4 from RFC791.
Pankaj	We want to innovate s/w at endpoints
??	Generic question. What I see is concept of transport and metadata. Need to have conversation about this.

9. *Multicast Issues in Networks Using NVO3*
(Ramki Krishnan/Linda Dunbar, 10 min)

draft-ghanwani-nvo3-mcast-issues-01

- Motivation is multicast issues
- Provides summary of issues related to multicast.

Benson	Would like to see discussion over mailing list.

10. *Network Virtualization Edge* (NVE)
(Lucy Yong, 10 min)
draft-yong-nvo3-nve-03

- Specifies NVE data plane interworking functionality.
- No intention to define new encapsulation
- What is the right way to split the two docs?
- Should the doc cover OAM?

11. *Layer 2 Gateway* (L2GW)
(Frank Xialang, 10 min)
draft-xia-nvo3-l2gw-00

- Going to present shortest presentation in my life :D
- Draft is about NVo3 gateway.
- How to interconnect two different networks?
- How to deal with L2 control protocol
- Welcome everyone to comment