LISP Generic Protocol Extension (LISP-GPE)

draft-lewis-lisp-gpe-02

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Introduction

- LISP GPE is a proposal to modify the LISP header to carry payloads other than IPv4/IPv6 EID payloads.

- One critical motivation is to create and maintain forwarding plane compatibility with VXLAN-GPE (draft-quinn-vxlan-gpe)

New in -02

- Added OAM Bit (O Bit)
- Added Versioning Bits (for explicit header version control)
- Shortened Protocol Type to 8 bits: Now, lower 8 bits in first word of LISP header define protocol type
- 8 bits recovered for future use
- Continues to align encap with draft-quinn-vxlan-gpe

LISP-GPE -02 Header

- Define lower 8 bits in first word of LISP header as protocol type
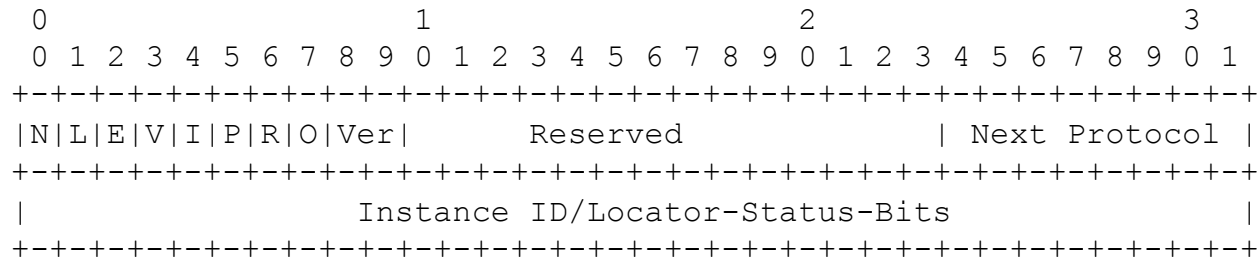- **Add OAM and Header-Version bits**

```
 0                   1                   2                   3
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|N|L|E|V|I|P|R|O|Ver|      Reserved         | Next Protocol |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                 Instance ID/Locator-Status-Bits             |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

              Figure 4: LISP-gpe Version bits (P=1)
```

Future Work

- The P bit comes at the expense of two features: Nonce, Map Versioning and Echo-Nonceing

- The Authors agreed to add explicit text discussing the reasoning's behind this choice