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BGP Tunnel Encapsulation Attribute for UDP

[draft-xu-softwire-encaps-udp-01](#)

Abstract

This document specifies a new Border Gateway Protocol (BGP) Tunnel Type of User Datagram Protocol (UDP) tunnels.

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Conventions used in this document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC-2119](#) [[RFC2119](#)].

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1. Introduction

[RFC5512] specifies a method by which Border Gateway Protocol (BGP) speakers can signal tunnel encapsulation information to each other and accordingly it defines support for Generic Routing Encapsulation (GRE)[RFC2784], Layer Two Tunneling Protocol - Version 3 (L2TPv3) [RFC3931] and IP in IP [RFC2003] tunnel types. This document builds on [RFC5512] and defines support for the User Datagram Protocol (UDP) tunnel type which is applicable to at least the following two application cases: IP-in-UDP encapsulation [[IP-in-UDP](#)] and MPLS-in-UDP encapsulation [[MPLS-in-UDP](#)].

2. Terminology

This memo makes use of the terms defined in [[RFC5512](#)].

3. BGP Tunnel Type Code for UDP

To use either the Encapsulation Subsequent Address Family Identifier (SAFI) or the BGP Encapsulation Extended Community defined in [[RFC5512](#)] to signal the UDP tunnel type information across BGP speakers, a new Tunnel Type code (TBD) indicating the UDP tunnel type needs to be assigned by IANA.

This document does not specify any UDP tunnel specific sub-TLV. Furthermore, the BGP Encapsulation Network Layer Reachability Information (NLRI) Format is not modified by this document.

4. Security Considerations

The security considerations mentioned in [[RFC5512](#)] is applicable to this new BGP Tunnel Type code for UDP tunnels as well. No new security risk is introduced by this new Tunnel Type code for UDP tunnels.

5. IANA Considerations

A new BGP Tunnel Type code indicating the UDP tunnel type needs to be assigned by IANA.

6. Acknowledgements

Thanks to.

7. References

7.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

7.2. Informative References

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[RFC3931] Lau, J., Ed., Townsley, M., Ed., and I. Goyret, Ed., "Layer Two Tunneling Protocol - Version 3 (L2TPv3)", [RFC 3931](#), March 2005.

[RFC2003] Perkins, C., "IP Encapsulation within IP", [RFC 2003](#), October 1996.

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[IP-in-UDP] Xu, X., Yong, L., Lee, Y., Fan, Y., Asati, R and I. van Beijnum, "Encapsulating IP in UDP", [draft-xu-softwire-ip-in-udp-02.txt](#) (work in progress), July 2013.

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