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Encoding Network Slice Identification for SRv6
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Abstract

This document describe a method to encode network slicing identifier within SRv6 domain.

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[1.](#) Introduction

SRv6 Network Programming[RFC8986] enables the creation of overlays with underlay optimization to be deployed in an SR domain[RFC8402].

As defined in [[RFC8754](#)], all inter-domain packets are encapsulated for the part of the packet journey that is within the SR domain. The outer IPv6 header [[RFC8200](#)] is originated by a node of the SR domain and is destined to a node of the SR domain.

This document describes a novel method to encode slice identifier in the outer IPv6 header of an SR domain. Unlike other proposed methods before, which will bring side effects on existed functions, by encoding network slicing identifier in the source IPv6 address of the outer header, this method avoids the drawbacks which previous proposals incur.

[1.1.](#) Requirements Language

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](#)].

[2.](#) Slice Identifier

Slice identifier (SLID) is a 16-bit Identifier which uniquely defines a slicing of the network in the specified SR domain.

[3.](#) SLID Assignment

5. Backward Compatibility

PE routers that do not set the SPI bit do not enable the SLID semantic of the IPv6 source address bits. Hence, SLID-aware routers would not attempt to classify these packets into a slice.

Any router that does not process the SPI nor the SLID forwards packets as usual.

6. Acknowledgements

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7. References

7.1. Normative References

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7.2. Informative References

- [RFC8200] Deering, S., and Hinden, D., "Internet Protocol, Version 6 (IPv6) Specification", [RFC 8200](#), DOI 10.17487/RFC8200, July 2017, <<https://www.rfc-editor.org/info/rfc8200>>.

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