

SRv6 SIDs

IETF 112, 6man

Background

- SPRING chair asked 6MAN ADs/chairs some questions
 - SPRING to 6MAN chairs/ADs [inquiry](#)
 - 6MAN chairs/ADs to SPRING [reply](#)
- 6MAN related issues that were raised include:
 - general lack of clarity about SIDs/their semantic requirements
 - SRH.Segment sLeft semantics differ from [RFC 8200§4.4](#)
- Separate operational concerns include:
 - SRH-less packets
 - how to help SRv6 domain “fail closed”
- Suresh volunteered to lead a draft
 - thank you!
 - we’re talking to other potential co-authors

Next Steps

- Work on initial draft with version -00 with the following proposed areas of coverage
 - How do SIDs deviate from classic [RFC 4291](#) addresses?
 - Are SIDs assigned to an interface or to a node?
 - Does ND apply to SIDs?
 - How do SR-unaware nodes treat SIDs in the IPv6 Destination Address field?
 - Can a SID appear in the Source Address field?
 - How is error-handling expected to work with C-SIDs?
 - Do we need a separate IPv6 address space to accommodate addresses with different expected behaviors?
 - **Critiques of these and other new ideas of topics to include are welcome**
- Expecting to have a draft out by late December

Thanks!!



Background Slides if
Needed

Background

- **RFC 8754** (“SRH”) SIDs
 - allocated from global unicast space
 - *could* have formally documented deviation from **RFC 4291**
 - §4.3.1 in conjunction with §5.1
 - may be interspersed with IPv6 addresses assigned to interfaces
- **RFC 8986** (“SRv6 Network Programming”) SIDs
 - whole prefixes handled by a given SR node
 - SIDs are not assigned to interfaces
 - LOC : FUNC : ARG form
 - *should* have formally documented deviation from **RFC 4291**
 - similar to **RFC 6052** NAT64 prefixes
 - expectation of “unicast semantics” depends upon SID behavior

Recent Proposal: Compressed SIDs

- [draft-filschenscheng-spring-srv6-srh-compression](#)
 - FUNC :ARG contains “compressed” data to build next SID
 - three “flavors”
 - NEXT-C-SID
 - can put an entire (small) SRH into the DA field
 - SRH not required for SR behavior
 - REPLACE-C-SID
 - Combined NEXT-and-REPLACE-C-SID

Recent Exchange

SPRING asked 6MAN chairs/ADs two questions:

1. Does the placement of a list of SIDs in the IPv6 DA field change the IPv6 architectural description of that field?
2. Does the operation of shifting information around in the IPv6 destination address field represent a modification or extension of the IPv6 data plane?

In both cases:

1. DA is source-selected unicast identifier of a VNF within an SR node
2. additional SR-aware protocol updates required (e.g., pseudo-header)