

UG bit clearance & 4rd Identifier

draft-ietf-softwire-4rd

IETF 86 Softwire WG

March 11/13, 2013

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UG bit concerns in 4rd

- **4rd has designed a V octet (0x03) in the first 8 bits of the Interface Identifier**
 - U=g=1, has been doubted whether it is actually compatible with the IPv6 addressing architecture
- **Request email has been sent to 6man mail list by softwire chair**
 - December 7, 2012, by Suresh
 - It provoked many discussion regarding to the semantic of ug bit
 - draft-carpenter-6man-ug has been written for generic ug semantic clearance regardless to 4rd specific

6man conclusion from mail list

- **Chairs Conclusion on <draft-carpenter-6man-ug-00.txt>**
 - Mail by Bob, co-signed by Ole
 - 1) The "u and g" bits did not end up being as useful as was thought when RFC4291 was standardized. Consequently, we don't think there is any need to continue the notion that an IID with "u" set to 1 means the IID contains a globally unique token.
 - 2) Under the current scheme defined in RFC4291, the "u" bit only means that the node creating the IID asserts that it is globally unique. It is incorrect to make any other assumptions about what is in the IID. The IID should be viewed as opaque by third parties.
- **ug bit can be specified arbitrary values**
 - So, 4rd can set u=g=1 as we do

4rd identifier

- **4rd needs an identifier to distinguish 4rd packet from native-IPv6 packets**
 - $u=g=1$ ensures 4rd address can be different from any existing native IPv6 address
 - the authors wish to reserve the Interface-ID range to avoid future collision
 - 6man discussion push this back, giving the experimental status of 4rd ([RFC5453] Reserved IPv6 Interface Identifiers)
- **Longer identifier could make less collision in the future**
 - We are going to make it 16-bit (x0300), also less IID space
 - If a reserved IID range can be made, it is better.

Comments are welcomed!

Thank You!