draft-ietf-schc-protocol-numbers

June 25 2024

Status

Work initiated by Bob Moskowitz to Request

1. An Internet Protocol Number
2. An Ethertype
3. A UDP port number

Moved from INT AREA to SCHC

Reviews by Eric V, Jo Touch, and Mirja Kühlewind

Eric's Review

- Two sections are "TBD"
  1. Basic use case for SCHC as a UDP port number
  2. UDP Port Number for SCHC
- The IANA considerations section does not follow RFC 8126 (… RFC 9542 for the EtherType)
- The use case appears to be related to aviation, which is very narrow

RFC 9542

3.1. Ethernet Protocol Assignment under the IANA OUI

Two-octet protocol numbers under the IANA OUI are available, as in

88-B7-00-00-5E-qq-qq

or

xx-xx-AA-AA-03-00-00-5E-qq-qq

where qq-qq is the protocol number.

A number of such assignments have been made out of the 2**16 protocol numbers available from 00-00-5E-00-00 to 00-00-5E-FF-FF (see [EthernetNum]). The extreme values of this range, 00-00-5E-00-00 and 00-00-5E-FF-FF, are reserved and require IESG Ratification for assignment (see Section 5.1). New assignments of protocol numbers (qq-qq) under the IANA OUI must meet the following requirements:

- the assignment must be for standards use (either for an IETF Standard or other standard related to IETF work),
- the protocol must include a version field at a fixed offset or an equivalent marking such that later versions can be indicated in a way recognizable by earlier versions,
- the protocol must be documented in an Internet-Draft or RFC, and
- such protocol numbers are not to be assigned for any protocol that has an EtherType. (That EtherType can be used directly, or -- in the LSAPs case -- it can be used with the SNAP SAP by putting an all-zero "OUI" before the EtherType as described above.)

In addition, the Expert Review (or IESG Ratification for the two reserved values) must be obtained using the procedure specified in Section 5.1.

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RFC 7042

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Jo’s review

Would Benefit from SCHC context and better case

The case for an Internet protocol number is insufficient. The case for an Internet protocol number should be based on the use of SCHC as a protocol following the IP header, however this implies that there would be one IP header that is not compressed followed by another that is.

Confusion?

The case for an Ethertype seems possible, but somewhat more challenging to make

Speaking from the perspective of the transport ports review team, port numbers identify services, not single “next” protocols… So the question is whether a service can negotiate use of SCHC – which is definitely preferable if possible.

Archi

Mirja's review

Why this is a separate document and not part of draft-ietf-schc-architecture

Timing?

At minimum this draft should have draft-ietf-schc-architecture as normative reference, and more important also the other way around

On the port request, the use case is not clear to me… The document mentions firewall traversal as the use case. Please not that RFC6335, however, does not recommend to use ports for firewall rules.

Do we have a case ?