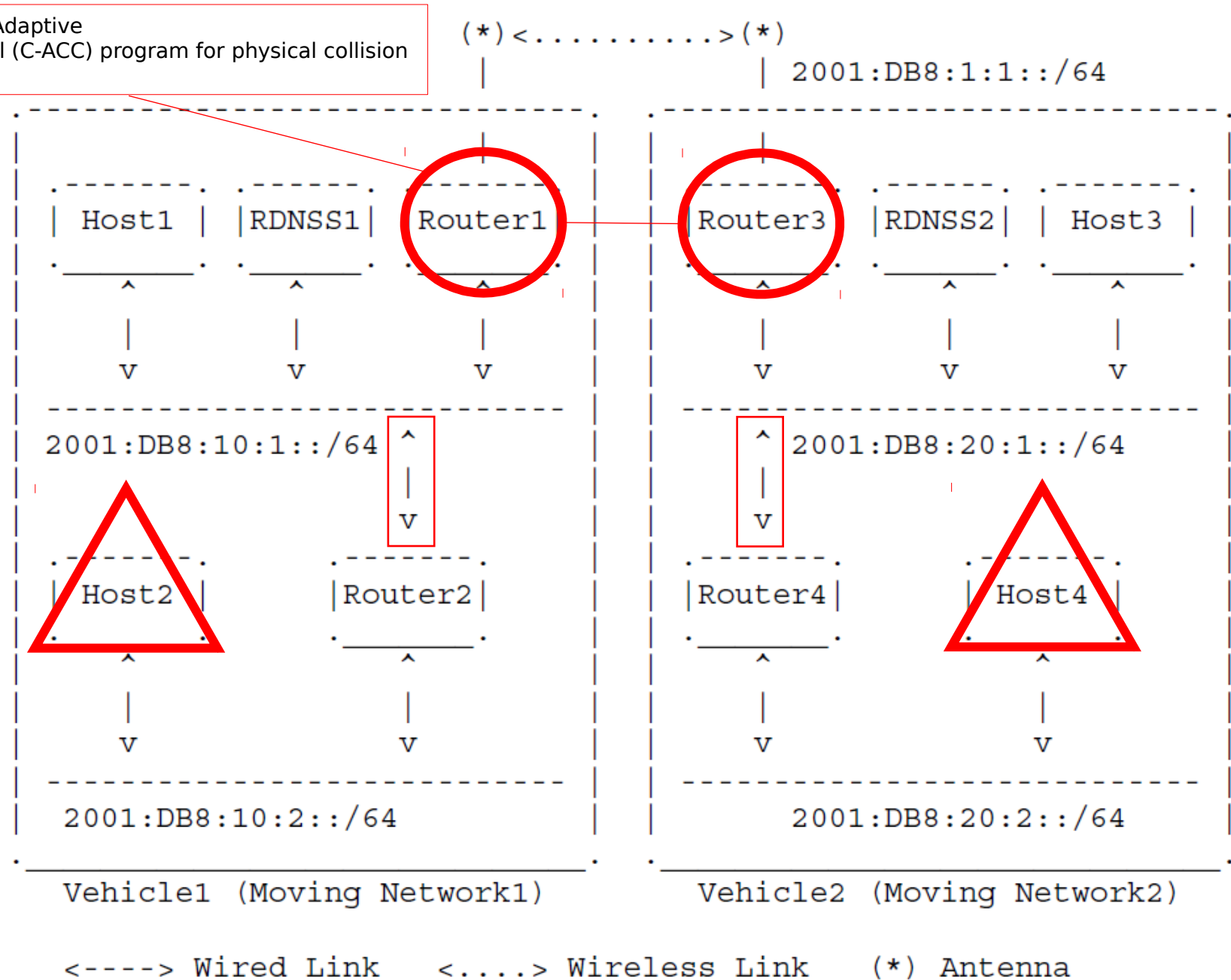


1. V2V

Cooperative Adaptive Cruise Control (C-ACC) program for physical collision avoidance.

Cooperative On-board Camera Sharing (C-OCS) program for sharing road hazards or obstacles to avoid road accidents.

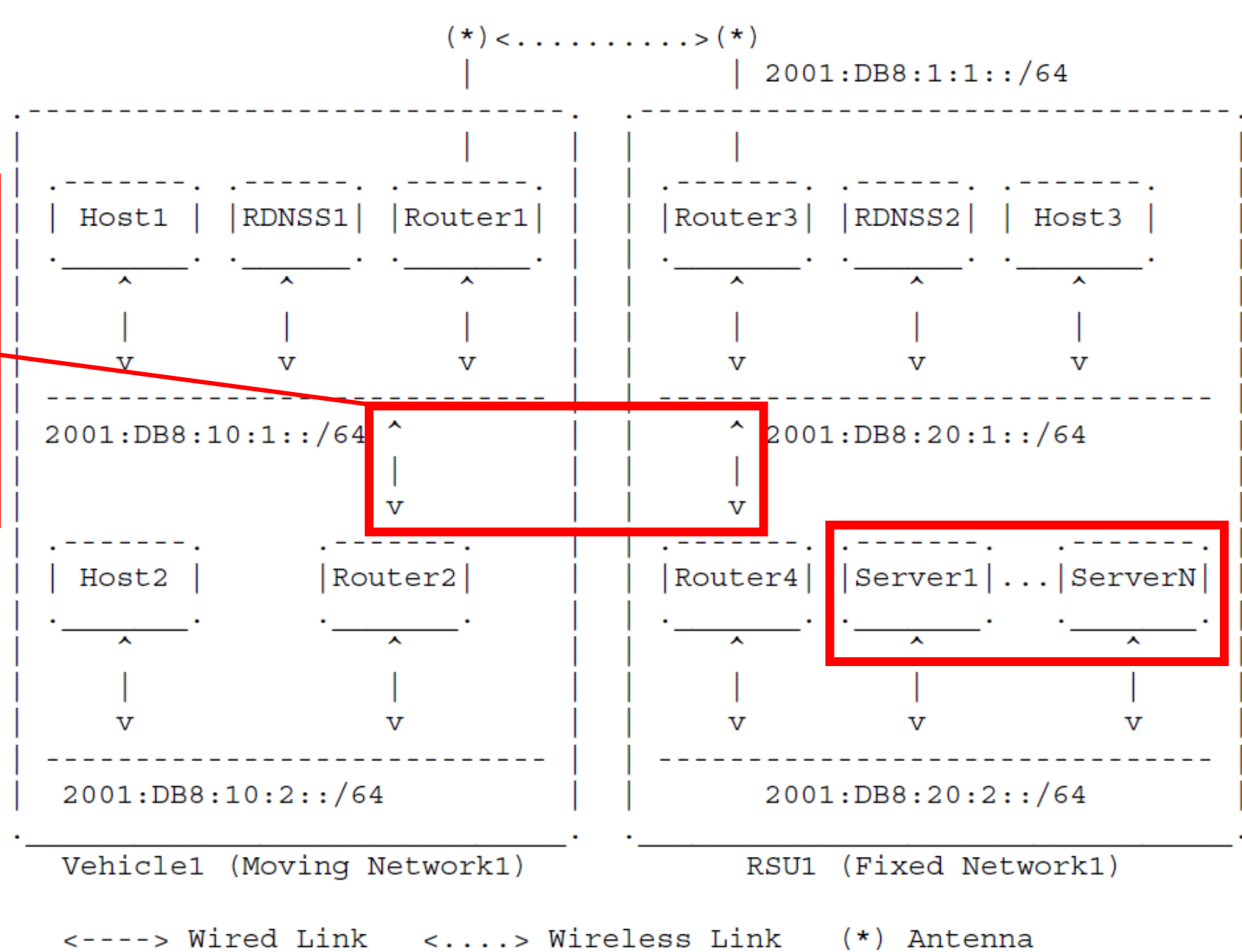


The vehicular applications, such as C-ACC and C-OCS, can be registered into the DNS Server (i.e., RDNSS) through DNSNA protocol in [ID-DNSNA] along with IPv6 ND DNS options in [RFC6106]. by referring to their own RDNSS through the DNSNA protocol [ID-DNSNA].

Figure 1: Internetworking between Vehicle Networks

1. V2I

internal network by referring to their own RDNSS through the DNSNA protocol [ID-DNSNA].



collection of servers (Server1 to Server N) for various services in the road networks, such as road emergency notification and navigation services. can be registered into the DNS Server (i.e., RDNSS) through DNSNA protocol in [ID-DNSNA] along with IPv6 ND DNS options in

Figure 2: Internetworking between Vehicle Network and RSU Network

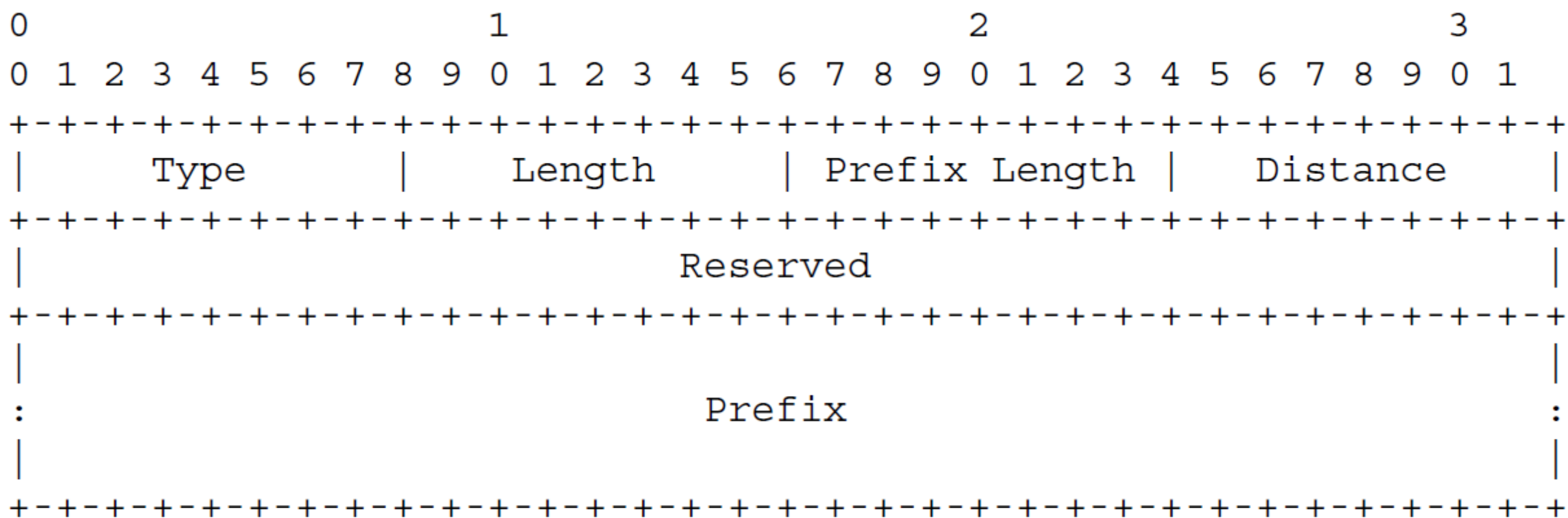


Figure 3: Vehicular Prefix Information (VPI) Option Format

Type:

8-bit identifier of the VPI option type as assigned by the IANA: TBD

Length:

8-bit unsigned integer. The length of the option (including the Type and Length fields) is in units of 8 octets. The value is 3.

Prefix:

Length 8-bit unsigned integer. The number of leading bits in the Prefix that are valid. The value ranges from 0 to 128.

Distance:

8-bit unsigned integer. The distance between the subnet announcing this prefix and the subnet corresponding to this prefix in terms of the number of hops.

Reserved:

This field is unused. It MUST be initialized to zero by the sender and MUST be ignored by the receiver.

Prefix:

An IP address or a prefix of an IP address. The Prefix Length field contains the number of valid leading bits in the prefix. The bits in the prefix after the prefix length are reserved and MUST be initialized to zero by the sender and ignored by the receiver.

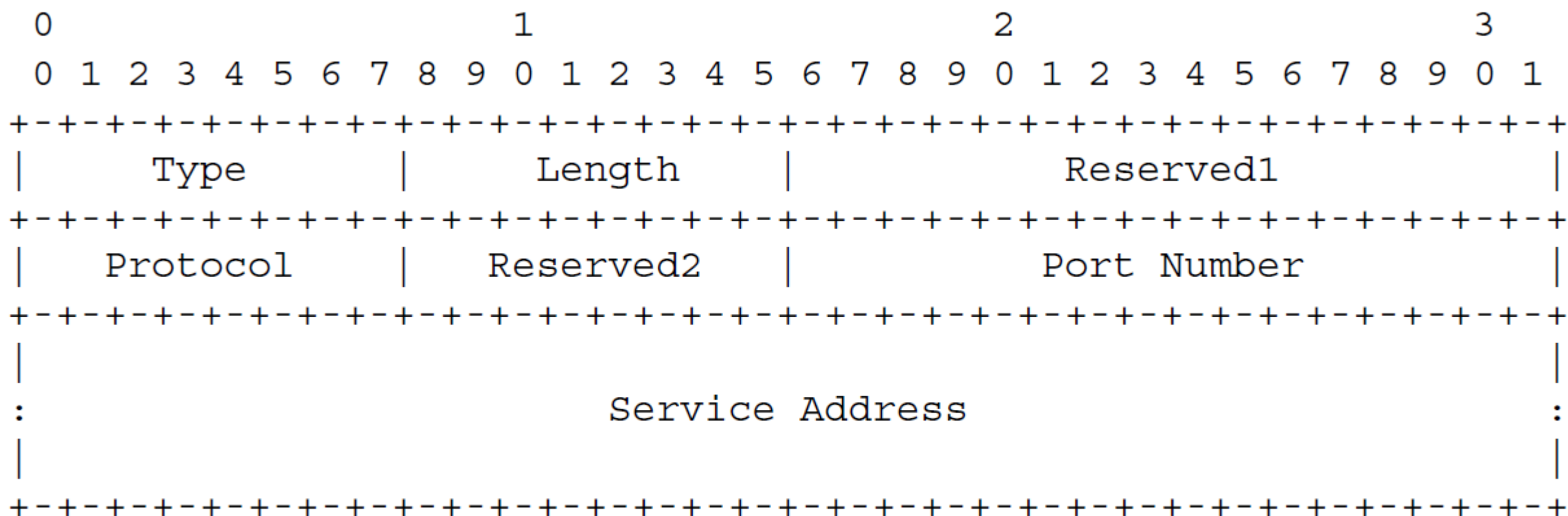


Figure 4: Vehicular Service Information (VSI) Option Format

Type:

8-bit identifier of the VSI option type as assigned by the IANA: TBD

Length:

8-bit unsigned integer. The length of the option (including the Type and Length fields) is in units of 8 octets. The value is 3.

Reserved1:

This field is unused. It MUST be initialized to zero by the sender and MUST be ignored by the receiver.

Protocol:

8-bit unsigned integer to indicate the upper-layer protocol, such as transport-layer protocol (e.g., TCP, UDP, and SCTP).

Reserved2:

This field is unused. It MUST be initialized to zero by the sender and MUST be ignored by the receiver.

Port Number:

16-bit unsigned integer to indicate the port number for the protocol.

Service Address

128-bit IPv6 address of a vehicular service.