

The RVI Core Fragmentation Protocol

Abstract

The Remote Vehicle Interaction (RVI) system is a framework for secure interaction between vehicles and other devices and/or cloud services. RVI is designed to be agnostic in regard to connectivity options and intermittent connectivity. One consequence of this is that large messages may have to be partially transmitted via one type of connection, and completed on another. The fragmentation protocol described below allows for varying Message Transfer Unit (MTU) and lets the remote client request fragments as needed.

Status of This Memo

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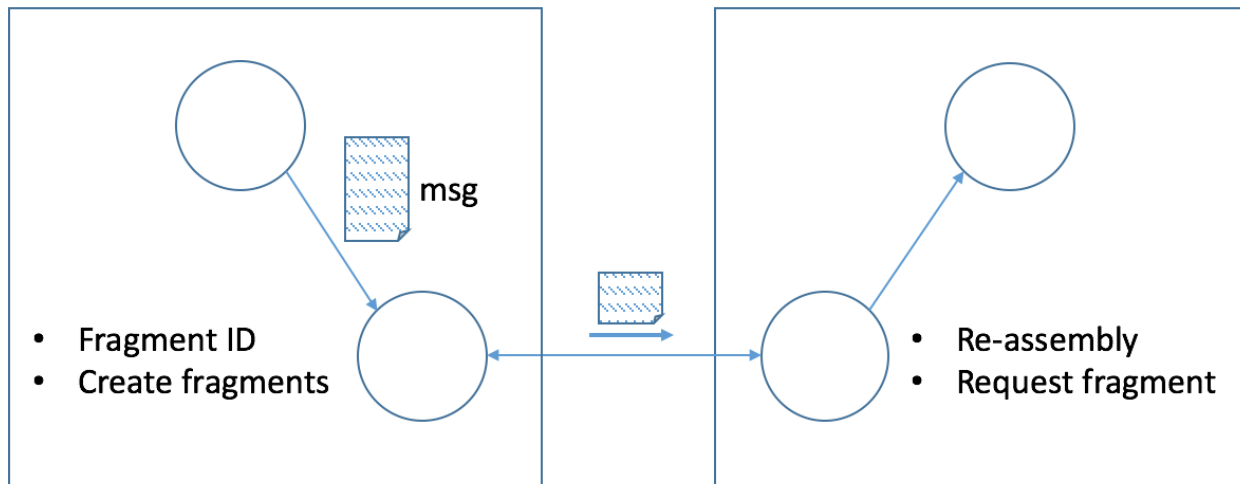
Introduction

Terminology

Term	Meaning
Client	Sending side of the interaction
Server	Receiving side of the interaction
MTU	Message Transfer Unit

System Overview

The fragmentation support is intended to operate immediately on top of the transport layer. In essence, the sending side (Client) asks the fragmentation support to deliver a message. The fragmentation support determines whether fragmentation is needed. If it is, it will create a first fragment, encode it and send it to the receiving end (Server).



The fragmentation support can operate over a transport using its own fragment/reassembly method (such as TCP), but does not require it, or makes any such assumptions.

Notation

The fragmentation protocol does not specify any particular encoding method. In this document, JSON notation is used. In practice, a byte-oriented JSON-like encoding, like msgpack [MSGP] would be more suitable.

Messages

