Optimizing Binary Serialization with an Independent Data Definition Format

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Abstract

The current technologies used for message communication over a network, will begin to be inefficient as the diversity of the hardware and the need to transfer more information in less time increases, as mobile applications and the bandwidth consumption is important; therefore, the methods of sending data in the network is an important area to analyze if we want to optimize the time of data transfer and size of the information. The object serialization is a key element to optimize when looking to reduce transfer time, network saturation, processing of data sent and storage of information. In this paper we propose an algorithm to optimize binary serialization based on the current formats like MessagePack, Protocol Buffers and JSON. To show the efficiency, test cases were executed which show an optimization of 25% and 50% in file size and serialization time respectively.

References


**Index Terms**

Computer Science  
Circuits and Systems

**Keywords**

Binary Serialization, data format, optimization, algorithm, web service.