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Abstract
The portability and popularity of mobile devices make the access of Internet content become a common phenomenon. To support different mobile devices in the heterogeneity networking environments, digital content providers have to provide different versions of the multimedia streaming video for clients to choose.
In this paper, we propose a caching replace strategy for multimedia streaming objects of a transcoding proxy. Traditional caching technology is not applicable to multimedia streaming proxy. Therefore, we propose a new caching algorithm with static weight transcoding graph and dynamic caching relation tree. With a transcoding proxy, the transmission time can be reduced by transcoding the original content before delivering it. In this paper, the proposed algorithm is compared with LRU and LFU cache algorithms in three parts: Hit Ratio, Byte Hit Ratio, and Average Transcoding Delay. Experimental results show that the proposed algorithm outperforms than traditional LRU and LFU cache algorithms.
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