Abstract

In order to improve data accessibility and reduce query delay in MANETs, cooperative caching approach is adapted in. So far, cache replacement algorithms like LRU, LFU, and LRU-MIN are used to reduce query delay and improve data accessibility in cluster based cooperative caching (CBCC) in MANETs. But LRU, LFU and LRU-MIN have its limitations: They have a high
overhead cost of moving cache blocks into the most recently used position each time when a cache block is accessed and further they do not exploit the ‘frequency’ information of memory accesses. In this paper, we give an overview of caching policies designed specifically for Web objects and provide a new algorithm of our own to address these issues. This new algorithm can be regarded as a LFU-MIN algorithm. We examine the performance of this and other replacement algorithms via omnet++ simulation environment. Simulation results shows that the proposed LFU-MIN enhances the performance of cluster based cooperative caching in MANETs when compared with LRU and LFU.

Reference


Index Terms

Computer Science Wireless
Key words

- Adhoc Networks
- cache replacement
- clustering
- cooperative caching
- Prefetching
- omnet++