Reducing Traffic and Delays in P2P Systems with Replicated Mutable Files

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***Abstract*—Peer-to-peer networks generate an increasing amount of traffic each year as they become more widely used and as larger files become more common to share. This has led research into how peer-to-peer networks can be used for tasks such as keeping mutable files across a network up-to-date and using other points in the network to store temporary copies of the file to ease the load on the server by diverting traffic. The integrated file replication and consistency maintenance algorithm (IRM) combined the problems into one and examined the effects on a network using Chord. This paper proposes reducing the strain on the file owners by reducing polling and diverting polling traffic to the replica nodes. These changes can be accomplished without decreasing the hit rate at the replica nodes, while also decreasing the overall traffic in the network and average latency.**

I. Introduction

Stuff