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A PEER-TO-PEER SWARM CREATION AND MANAGEMENT FRAMEWORK

ADRIANA DRAGHICI, MARIUS SANDU-POPA,
RAZVAN DEACONESCU, NICOLAE TAPUS,

AUTOMATIC CONTROL AND COMPUTERS FACULTY
UNIVERSITY POLITEHNICA OF BUCHAREST
BUCHAREST, 060042

EMAIL: {ADRIANA.DRAGHICI, MARIUS.SANDU-POPA}@CTI.PUB.RO,
{RAZVAN.DEACONESCU, NICOLAE.TAPUS}@CS.PUB.RO

ABSTRACT. The continuous development of Internet bandwidth, communication and content variety have enabled peer-to-peer protocols to take place among the most heavily used protocols in the Internet, with BitTorrent as the current flagship. Recent research has focused on measuring Peer-to-Peer systems and proposing improvements and enhancements to existing protocol with the goal of ensuring rapid content distribution and general user satisfaction. In this paper we present a framework that allows easy swarm creation and control for different BitTorrent clients. With the help of a virtualized infrastructure and a client-server software layer we are able to create, command and manage large sized BitTorrent swarms. The framework allows a user to run, schedule, start, stop clients within a swarm and collect information regarding their behavior. The swarm management framework allows the creation and analysis of diverse scenarios involving BitTorrent swarms. These scenarios are specially designed to allow in depth-analysis of BitTorrent clients swarms, by providing experimental data that may help confirm theoretical hypotheses.