

Topological Analyses of Unstructured Peer to Peer Systems: A Survey

Authors : Hend Alrasheed

Abstract : Due to their different properties that have led to avoid several limitations of classic client/server systems, there has been a great interest in the development and the improvement of different peer to peer systems. Understanding the properties of complex peer to peer networks is essential for their future improvements. It was shown that the performances of peer to peer protocols are directly related to their underlying topologies. Therefore, multiple efforts have analyzed the topologies of different peer to peer systems. This study presents an overview of major findings of close experimental analyses to different topologies of three unstructured peer to peer systems: BitTorrent, Gnutella, and FreeNet.

Keywords : peer to peer networks, network topology, graph diameter, clustering coefficient, small-world property, random graph, degree distribution

Conference Title : ICCNDC 2016 : International Conference on Computer Networks and Data Communication

Conference Location : Miami, United States

Conference Dates : March 24-25, 2016