

Investigation of Chord Protocol in Peer to Peer Wireless Mesh Network with Mobility

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Abstract : File sharing in networks are generally achieved using Peer-to-Peer (P2P) applications. Structured P2P approaches are widely used in adhoc networks due to its distributed and scalability features. Efficient mechanisms are required to handle the huge amount of data distributed to all peers. The intrinsic characteristics of P2P system makes for easier content distribution when compared to client-server architecture. All the nodes in a P2P network act as both client and server, thus, distributing data takes lesser time when compared to the client-server method. CHORD protocol is a resource routing based where nodes and data items are structured into a 1- dimensional ring. The structured lookup algorithm of Chord is advantageous for distributed P2P networking applications. Though, structured approach improves lookup performance in a high bandwidth wired network it could contribute to unnecessary overhead in overlay networks leading to degradation of network performance. In this paper, the performance of existing CHORD protocol on Wireless Mesh Network (WMN) when nodes are static and dynamic is investigated.

Keywords : wireless mesh network (WMN), structured P2P networks, peer to peer resource sharing, CHORD Protocol, DHT

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