ISSN No: 2348-4845
International Journal & Magazine of Engineering, Technology, Management and Research
A Peer Reviewed Open Access International Journal

Enhanced File Sharing System in P2P with Access Availability for Social Networks Using Node Storage and Meeting Frequency

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ABSTRACT:

Current peer-to- peer (P2P) file sharing methods in mobile ad hoc networks (MANETs) can be classified into three groups: flooding-based, Local broadcasting based advertisement contact-based. The first two techniques can simply be high overhead and low scalability. They are mainly developed for associated MANETs, in which end-to- end connectedness among nodes is ensured. The third group of method, the social contact-based method adapt to the opportunistic nature of disconnected MANETs. A P2P content based file sharing system, namely Social network based P2P content file sharing system in disconnected Mobile adhoc Networks (SPOON) is used to derive a node's interests from its files for content-based file searching using interest extraction algorithm. For competent file searching, SPOON gathered common-interest nodes that frequently meet with each other as communities. It takes the benefit of node mobility by designating constant nodes, which have the most frequent contact, with neighborhood members, as community coordinators for searching within the community and hugely mobile nodes tat visit other communities frequently as community ambassadors for search in other community.

I. INTRODUCTION:

In the course of recent years, the colossal prevalence of the Internet has created a critical jolt to P2P [1] record sharing frameworks. For instance, Bit Torrent constitutes approximately 35 percent of all activity on the Internet. There are two classes of P2P frameworks: unstructured and structured. Unstructured P2P systems, for example, Gnutella and Free net don't allot obligation regarding information to particular hubs. Hubs join and leave the system as indicated by some free standards. As of now, unstructured P2P systems' record question strategy depends on either flooding where the inquiry is spread to all the hub's neighbors, or arbitrary walkers where the question is sent to haphazardly picked neighbors until the document is found. Be that as it may, flooding and arbitrary walkers can't ensure information area. Structured P2P systems, i.e., Distributed Hash Tables (DHTs) [2], can defeat the downsides with their elements of higher productivity, adaptability, and deterministic information area. They have entirely controlled topologies, and their information arrangement and query calculations are accurately characterized in view of a DHT. Information structure and steady hashing capacity. The node in charge of a key can simply be found regardless of the possibility that the framework is in a ceaseless condition of progress. A large portion of the DHTs require O (log n) bounces per query ask for with O (log n) neighbors per node [3], where n is the quantity of nodes in the framework. A key foundation to judge a P2P document sharing framework is its record area productivity.

To enhance this effectiveness, various techniques have been proposed. One strategy utilizes a super peer topology, which comprises of super nodes with quick associations and general nodes with slower connections. A super node associates with other super nodes and some consistent nodes, and a general node interfaces

Cite this article as: Makkuva Pradeep Kumar & P.J.V.G. Prakasa Rao, "Enhanced File Sharing System in P2P with Access Availability for Social Networks Using Node Storage and Meeting Frequency", International Journal & Magazine of Engineering, Technology, Management and Research, Volume 4 Issue 12, 2017, Page 158-163.

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with a super node. In this super-peer topology, the nodes at the focal point of the system are speedier and consequently deliver a more solid and stable backbone.

This permits a bigger number of messages to be steered than a slower backbone and, thusly, permits more prominent adaptability. Super-peer systems involve the center ground amongst concentrated and totally symmetric P2P organizes, and can possibly consolidate the advantages of both brought together and appropriated seeks. Another class of techniques to enhance record area productivity is through a closeness aware structure. A coherent closeness deliberation got from a P2P framework does not really coordinate the physical nearness data in all actuality. The most limited way as indicated by the routing protocol (i.e., the least hop count routing) is not really the briefest physical way.

This befuddle turns into a major obstruction for the sending and execution advancement of P2P file sharing frameworks. A P2P framework ought to use nearness data to diminish document inquiry overhead and improve its effectiveness [4].

At the end of the day, allotting or imitating a record to a node that is physically more like a requester can essentially help the requester to recover the document productively. Proximity-aware clustering can be utilized to amass physically close companions to adequately enhance effectiveness. The second rate class of techniques to enhance document area productivity is to group hubs with comparative interests, which diminish the record area inactivity.

Although various closeness based and intrigue based super-peer topologies have been proposed with various components, couple of techniques can group peers as per both vicinity and intrigue. Also, the vast majority of these techniques are on unstructured P2P frameworks that have no strict arrangement for topology development. They can't be straightforwardly connected to general DHTs notwithstanding their higher record area productivity.

II. LITERATURE SURVEY:

Mazhar Al et al. [1] presented a technique to ensure the integrity, freshness, and availability of data in a cloud.

The public cloud outsourced data need to be secured. Unauthorized data access by other users and Processes (whether unintentionally or intentionally) must be prevented. A cloud must ensure throughput, reliability, and security. The third party requires more memory space and the data can't be transmitting in a secure way & not in sequential order. Unauthorized data access by other users and processes (whether accidental or deliberate) which must be prevented. The security mechanism must substantially increase an attacker's effort to retrieve a reasonable amount of data even after a successful intrusion in the cloud [5].

So we can deduce that both security and performance for the next generation large-scale systems becomes critical, such as clouds. Therefore, we proposed, we collectively approach the issue of security and performance as a secure data replication problem. In our proposed system to overcome these problems we implemented division and replication of data in the cloud for excellent performance and security, we correlated the particular data replication between division of a file into fragments .third party and the end user any other person can't interfere due to security reasons .we implemented data replications by two algorithms are used first one is FS-Drops (fragment and snuffle -drops) which will fragment a file into 4 pieces and shuffled (like 1-2, 2-3, 3-4, 4-1).

And store in different server so in future some server is not available are hacked we can get back our original data from remaining server. The second algorithm is third party audit cloud server, time to time will audit our storage sever for data integrity, also for every data modification it will do audit so that the storage server performance will not be affected and data will be very safe, data's sequential order will find easily, it provide better communication between the user and cloud, saves the file is an easy task.

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An analysis of cloud computing security issues, Akhil Behl and Kanika Behl [2] investigating the vivid security issues and presents a cloud security solution. Standards and regulations stated by the providers for the customers to ensure sufficient security. Virtualization security, identity and access management, threat management, content security, and data privacy need to be given priority and require more focus. Data encryption all through the lifecycle can be one method of data protection. In cloud we are not known where our data resides, what we know is these are shared servers.

D.Boru, et al. Energy-efficient data replication in cloud computing datacenters, [3] this project reviews the topic of data replication in geographically distributed cloud computing data centers and proposes a novel replication solution which in addition to traditional performance metrics, such as availability of network bandwidth, optimizes energy efficiency of the system. Moreover, the optimization of communication delays leads to improvements in quality of user experience of cloud applications.

Bharti Dhote, A.M. Kanthe, Secure Approach for Data in Cloud Computing,[4] described the method for data security, which is the major parameter of the quality of service. Paper includes data division, server misbehavior, checking integrity of data with the help of token pre-computation. The previous work does not support for dynamic insertion but here supports. This also ensures the data availability in case of communication link failure [6].

W. A. Jansen, Cloud hooks: Security and privacy issues in cloud computing, [5] presented the data replication in cloud computing data centers with energy-efficiency and bandwidth consumption of the system. The results obtained guide the design of future data replication solutions.

Jules and opera [6] presented a technique to ensure the integrity, freshness, and availability of data in a cloud. The data migration to the cloud is performed by the Iris file system. A gateway application is designed and employed in the organization that ensures the integrity and freshness of the data using a Markel tree. The file blocks, MAC codes, and version numbers are stored at various levels of the tree. The proposed technique in [6] heavily depends on the user's employed scheme for data confidentiality. Moreover, the probable amount of loss in case of data tempering as a result of intrusion or access by other VMs cannot be decreased. Our proposed strategy does not depend on the traditional cryptographic techniques for data security. Moreover, the OPSDR methodology does not store the whole file on a single node to avoid compromise of all of the data in case of successful attack on the node.

III. MOTIVATION BEHIND THE WORK:

A key rule to judge a P2P file sharing framework is its document area productivity. To enhance this productivity, various techniques have been proposed. One strategy utilizes a super associate topology which comprises of super nodes with quick associations and standard nodes with slower connections. A super node interfaces with other super nodes and some general nodes, and a customary hub associates with a super node. In this super-peer topology, the nodes at the focal point of the system are quicker and subsequently create a more dependable and stable backbone. This permits a bigger number of messages to be steered than a slower backbone and, subsequently, permits more prominent versatility. Super-peer systems possess the center ground amongst brought together and altogether symmetric P2P arranges, and can possibly consolidate the advantages of both unified and circulated looks. Another class of strategies to enhance record area proficiency is through a nearness mindful structure. The second rate class of strategies to enhance document area proficiency is to group nodes with comparable interests which lessen the file location latency [7].

IV. PROPOSED METHOD:

This paper presents a proximity-aware and interest-clustered P2P file sharing System (PAIS) on an organized P2P framework. It shapes physically-close

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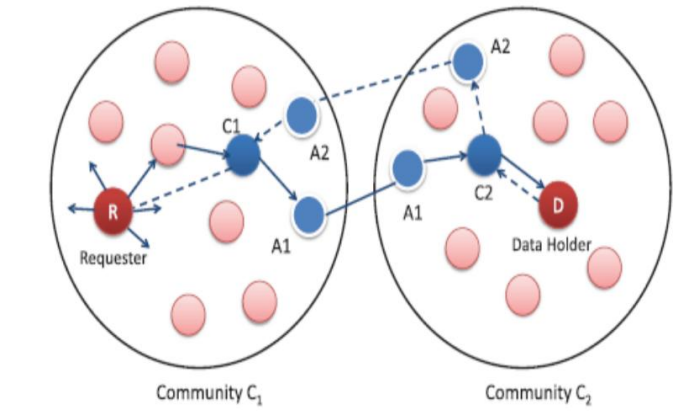
nodes into a bunch and further gathering's physically-close and normal intrigue nodes into a sub-cluster. It additionally puts documents with similar interests together and make them available through the DHT Lookup () directing capacity. All the more vitally, it keeps all points of interest of DHTs over unstructured P2Ps. Depending on DHT query approach instead of broadcasting, the PAIS development [8] expends significantly less cost in mapping nodes to groups and mapping groups to intrigue sub-groups. PAIS utilizes an astute document replication calculation to further improve record query effectiveness. Third, to decrease document looking postponement, PAIS utilizes proactive record data gathering so that a record requester can know whether it's asked for record is in its close-by nodes.

Fourth, to decrease the overhead of the document data gathering, PAIS utilizes blossom channel based record data accumulation and comparing appropriated document seeking. Fifth, to enhance the document sharing productivity, PAIS positions the blossom channel brings about request. 6th, considering that an as of late went to document has a tendency to be gone to once more, the blossom channel based approach is improved by just checking the recently added sprout channel data to diminish record searching delay [9].

SYSTEM ARACHITECTURE:



V. IMPLEMENTATION AND RESULTS:

1) PAIS: A proximity-aware interest-clustered p2p file sharing system. In our past work], we concentrated on a Bit Torrent client movement follow to break down the client document sharing practices. We found that long separation record recovery exists. In this way, we can bunch physically close nodes into a group to improve record sharing productivity. Additionally, peers tend to visit records in a couple interests. In this way, we can advance group nodes that share an enthusiasm into a sub-group. At long last, mainstream records in every intrigue are shared among associates that are internationally circulated. In this manner, we can utilize record replication between areas for well known documents, and utilize framework wide document hunting down disagreeable records. We present the point by point plan of PAIS beneath. It is appropriate for a document sharing framework where records can be arranged to various interests and every intrigue can be ordered to various sub-interests.

2) PAIS Structure: PAIS is created in view of the Cycloid organized P2P network. Cycloid is a query effective, steady degree overlay with n=d. 2d hubs, where d is its measurement. It accomplishes a period many-sided quality of O(d) per query ask for by utilizing O(1) neighbors per hub. Every Cycloid hub is spoken to by a couple of records (k,ad-1ad-2… .a0) where k is a cyclic list and (advertisement 1ad-2… .a0) is a cubical file. The cyclic list is a whole number extending from 0 to d - 1, and the cubical file is a twofold number somewhere around 0 and 2d - 1. The hubs with the same cubical record are requested by their cyclic list mod d on a little cycle, which we call a cluster [10-14].

3) PAIS Construction and Maintenance: Node proximity representation. A land checking technique can be utilized to speak to node closeness on the system by records utilized as a part of. Milestone grouping has been generally embraced to produce closeness data. It depends on the instinct that hubs near each other are probably going to have comparable separations to a couple chose points of interest nodes. We expect there are m points of interest nodes that are haphazardly scattered in the Internet.

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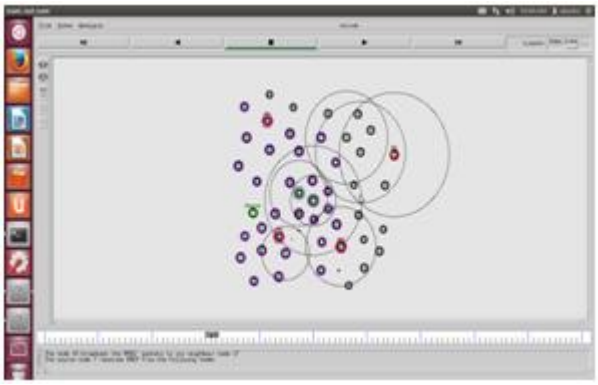

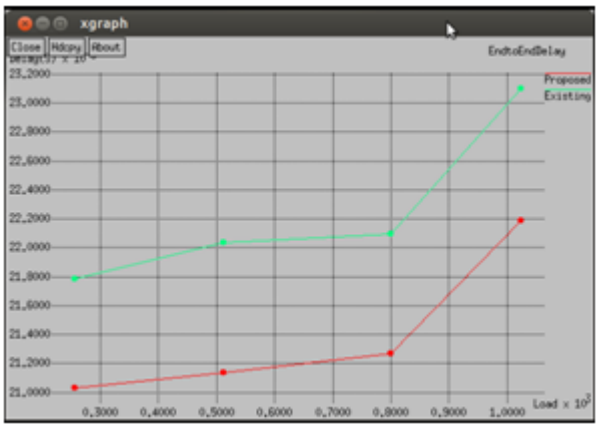

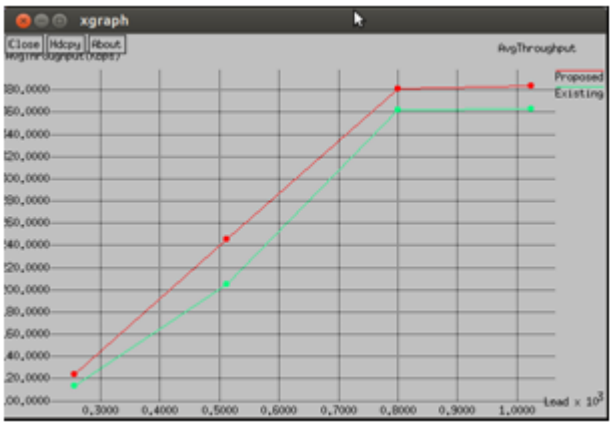

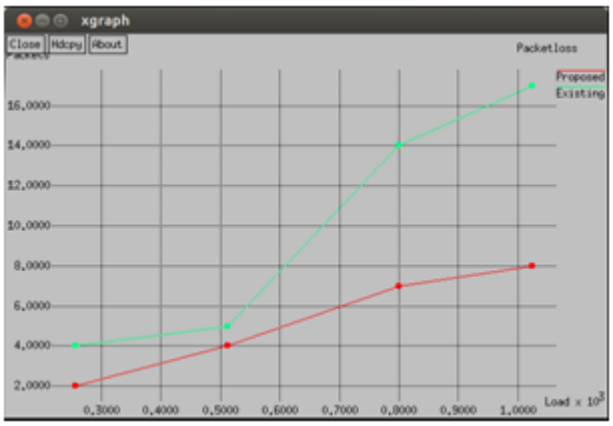

VI. CONCLUSION AND FUTURE WORK:

As of late, to improve record area effectiveness in P2P frameworks, intrigue grouped super-peer systems and vicinity grouped super-peer systems have been proposed. Although both methodologies enhance the execution of P2P frameworks, few works group peers in view of both associate intrigue and physical vicinity at the same time. Additionally, it is harder to acknowledge it in organized P2P frameworks because of their entirely characterized topologies, in spite of the fact that they have high productivity of record area than unstructured P2Ps. In this paper, we present proximity-aware and intrigue grouped P2P record sharing framework in light of an organized P2P. It groups peers in light of both intrigue and vicinity by exploiting a various leveled structure of an organized P2P. PAIS utilizes a keen document replication calculation that duplicates a record as often as possible asked for by physically close hubs close to their physical area to improve the document query effectiveness. At long last, PAIS improves the document looking effectiveness among the closeness close and basic intrigue hubs through various methodologies. The follow driven trial comes about on Planet Lab exhibit the productivity of PAIS in examination with other P2P document sharing frameworks.

It drastically decreases the overhead and yields huge enhancements in document area productivity even in hub dynamism. Likewise, the exploratory results demonstrate the adequacy of the methodologies for enhancing record looking effectiveness among the vicinity close and normal intrigue nodes.

In the proposed paper, record dissemination is done between the companions by FILE AND FILEID. It can be upgraded to give increasingly the client particular pursuit, for example, document name and their sub-intrigue. Consequently, the requester will get particular document of his advantage. It can be upgraded by making another super companion node which contains just the data about the sub intrigue division of every record furthermore it decreases the looking time delay.

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International Journal & Magazine of Engineering, Technology, Management and Research
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