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Identification of Data Result Using Effective Probabilistic Flooding Technology

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ABSTRACT: we propose a generalization of the essential flooding search strategy for suburbanised unstructured peer-to-peer (P2P) networks. In our algorithmic program a peer forwards a question to at least one of its neighbors employing a chance that's a perform of the quantity of connections within the overlay network of each. Moreover, this chance might also depend upon the space from the question creator. to research the performance of the projected search strategy in heterogeneous suburbanised unstructured P2P networks we tend to develop a generalized random graph (GRG)primarily based model that takes into consideration the high the non-uniform distribution of resources among peers. moreover, the model includes associate analysis of peer convenience, i.e., the potential of relaying queries of different peers, as a perform of the question generation rate of every peer.

KEYWORDS: peer-to-peer (P2P), Generalized Random Graph (GRG)

I. INTRODUCTION

A Peer-to-peer (P2P) paradigm has emerged as new model for distributed networked services and applications. P2Papplications are deployed in many various areas, like distributed grid computing, storage, web cache, net telecom, streaming, conferencing, content distribution, and so on. How ever file sharing applications square measure maybe the foremost popularP2P applications: many various file sharing systems, like Gnutella, Kazaa, Edonkey, Emule, Bit Torrent, exist and collect million of users. These variety of applications square measure characterizing a good fraction of the net traffic these days as witnessed by many studies that recently place obvious that P2P traffic is getting down to dominate the information measure in bound segments of the net. Associate exceeding these applications the participants (termed as peers) organize themselves in an overlay (logical) network on prime of the physical network. every peer establishes application level connections solely to a set of illustrious peers

When a peer has to find a resource it sends out request messages (queries) to its neighbors. There square measure 2 main approaches for locating a resource in unstructured suburbanised P2P networks: flooding and stochastic process. In stochastic process primarily based search ways peers forward a question message (termed as walker) to at least one haphazardly chosen neighbor at every step though many walkers may be utilized in parallel to extend the likelihood of with success locating a resource (hit probability).In flooding primarily based search ways, once a peer request resource it sends queries to any or all its neighbors. This assortment of neighbors could then forward the question to their neighbors (excluding, of course, the neighbor that sent the initial request). In Flooding, the question is shipped to any or all the Routes, the price to retrieving the information is a lot of.

PROPOSED SYSTEM:

We are proposing the Probabilistic Flooding Process, as we are judging the best route to retrieve the results. The query sent to index file first. The index file will contain all the files names as index in the network. So that the peer will check its index file and revert the query back to the original node which has the resultant data in it. So the resultant node will retrieve the result to the user. User will specify the Time To Live (TTL) for the query raised. This process is efficient in retrieving the result within the time specified.

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II. LITERATURE REVIEW

AN EFFICIENT MECHANISM FORONE-TO-MANY CONTENT DISTRIBUTION

In this paper, we propose Mutual cast, a new delivery mechanism for content distribution in peer-to-peer (P2P) networks. Compared with prior one-to-many content distribution approaches, Mutual cast achieves full utilization of the upload bandwidths of the peer nodes, thereby maximizing the delivery throughput. Mutual cast splits the to-be-distributed content into many small blocks, so that the more resourceful nodes may redistribute more blocks, and the less resourceful nodes may redistribute fewer blocks. Each content block is assigned to a single node for distribution, which can be a content-requesting peer node, a non-content-requesting peer node, or even the source node. The throughput of the distribution is controlled by redistribution queues between the source and the peer nodes. Furthermore, Mutual cast can be reliable and synchronous. Thus, it can be applied to file/software downloading, media streaming, real-time audio/video conferencing,

A DATA-DRIVEN OVERLAYNETWORK FOR PEER-TO-PEER LIVE MEDIA STREAMING

This paper presents DONet, a Data-driven Overlay Network for live media streaming. The core operations in DONet are very simple: every node periodically exchanges data Availability information with a set of partners, and retrieves unavailable data from one or more partners, or supplies available data to partners. We emphasize three salient features of this data-driven design: 1) *easy to implement*, as it does not have to construct and maintain a complex global structure; 2) *efficient*, as data forwarding is dynamically determined according to data availability while not restricted by specific directions; and 3)*robust and resilient*, as the partnerships enable adaptive and quick switching among multi-suppliers. We show through analysis that DONet is scalable with bounded delay. We also address a set of practical challenges for realizing DONet, and propose an efficient member- and partnership management algorithm, together with an intelligent scheduling algorithm that achieves real-time and continuous distribution of streaming contents. We have extensively evaluated the performance of DONet over the Planet Lab. Our experiments, involving almost all the active Planet Lab nodes, demonstrate that DONet achieves quite good streaming quality even under formidable network conditions. Moreover, its control overhead and transmission delay are both kept at low levels. An Internet-based DONet implementation, called *Cool Streamingv.0.9*, was released on May 30, 2004, which has attracted over 30000 distinct users with more than 4000 simultaneously being online at some peak times. We discuss the key issues toward designing *Cool Streaming* in this paper, and present several interesting observations from these large-scale tests; in particular, the larger the overlay size, the better the streaming quality it can deliver.

WIDE-AREA COOPERATIVE STORAGE WITH CFS

The Cooperative File System (CFS) is a new peer-to-peer read-only storage system that provides provable guarantees for the efficiency, robustness, and load-balance of file storage and retrieval.CFS does this with a completely decentralized architecture that cans cale to large systems. CFS servers provide a distributed hash table (DHash) for block storage. CFS clients interpret DHash blocks as a file system. DHash distributes and caches blocks at a fine granularity to achieve load balance, uses replication for robustness, and decreases latency with server selection. Dash finds blocks using the Chord location protocol, which operates in time logarithmic inthe number of servers.CFS is implemented using the SFS file system toolkit and runson Linux, Open BSD, and FreeBSD. Experience on a globally deployed prototype shows that CFS delivers data to clients as fast as FTP. Controlled tests show that CFS is scalable: with 4,096servers, looking up a block of data involves contacting only seven servers. The tests also demonstrate nearly perfect robustness and unimpaired performance even when as many as half the servers fail.

A CASE FOR END SYSTEM MULTICAST

The conventional wisdom has been that IP is the natural protocol layer for implementing multicast related functionality. However, more than a decade after its initial proposal, IP Multicast is still plagued with concerns pertaining to scalability, network management, deployment and support for higher layer functionality such as error, flow and congestion control. In this paper, we explore an alternative architecture that we term End System Multicast, where end systems implement all multicast related functionality including membership management and packet replication. This shifting of multicast support from routers to end systems has the potential to address most problems associated with IP Multicast. However, the key concern is the performance penalty associated with such a model. In particular, End System Multicast introduces duplicate packets on physical links and incurs larger end-to-end delays than IP Multicast. In this paper, we study these performance concerns in the context of the Narada protocol. In Narada, end systems self organize into an overlay structure using a fully distributed protocol. Further, end systems attempt to optimize the efficiency of the overlay by adapting to network dynamics and by considering application level performance. We present details of Narada and evaluate it using both simulation and Internet experiments. Our results indicate that the performance penalties are low both from the application and the network perspectives. We believe the potential benefits of transferring multicast functionality from end systems to routers significantly outweigh the performance penalty incurred.

A DECENTRALIZED PEERTOPEERWEB CACHE

This paper presents a decentralized, peer-to-peer web cache called Squirrel. The key idea is to enable web browsers on desktop machines to share their local caches, to form an Efficient and scalable web cache, without the need for dedicated hardware and the associated administrative cost. We propose and evaluate decentralized web caching algorithms for Squirrel, and discover that it exhibits performance comparable to a centralized web cache in terms of hit ratio, bandwidth us-age and latency. It also achieves the beets of decentralization, such as being scalable, self-organizing and resilient to node failures, while imposing low overhead on the participating nodes.

III. PROBLEM IDENTIFICATION

When a peer needs to locate a resource it sends out request messages (queries) to its neighbors. There are two main approaches for locating a resource in unstructured decentralized P2P networks: flooding and random walk. In random walk based search strategies peers forward a query message (termed as walker) to one randomly chosen neighbor at each step although several walkers can be employed in parallel to increase the probability of successfully locating a resource (hit probability).In flooding based search strategies, when a peer request resource it sends queries to all its neighbors. This collection of neighbors may then forward the query to their neighbors (excluding, of course, the neighbor that sent the original request). These neighbors may then propagate the query to their neighbors and so on upto a certain predefined maximum level.

In the Existing System of implementation, we were using two Principles

1. Random Walk
2. Flooding

In Random Walk, the query is send to the Route in a random way, route is selected randomly. So, the Time taken for retrieving the data is prolonged as the Result retrieval may not selected at the first route itself.

In Flooding, the query is sent to all the Routes, the cost to retrieving the data is more

We are proposing the Probabilistic Flooding Process, as we are judging the best route to retrieve the results. The query sent to index file first. The index file will contain all the files names as index in the network. So that the peer will check its index file and revert the query back to the original node which has the resultant data in it. So the resultant node will retrieve the result to the user. User will specify the Time To Live (TTL) for the query raised. This process is efficient in retrieving the result within the time specified.

IV. PROPOSED IMPLEMENTATION

Implementation is the most crucial stage in achieving a successful system and giving the user’s confidence that the new system is workable and effective. Implementation of a modified application to replace an existing one. This type of conversation is relatively easy to handle, provide there are no major changes in the system.

Each program is tested individually at the time of development using the data and has verified that this program linked together in the way specified in the programs specification, the computer system and its environment is tested to the satisfaction of the user. The system that has been developed is accepted and proved to be satisfactory for the user. And

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so the system is going to be implemented very soon. A simple operating procedure is included so that the user can understand the different functions clearly and quickly.

Initially as a first step the executable form of the application is to be created and loaded in the common server machine which is accessible to the entire user and the server is to be connected to a network. The final stage is to document the entire system which provides components and the operating procedures of the system. Implementation is the stage of the paper when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective.

The implementation stage involves careful planning, investigation of the existing system and it's constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods.

Implementation is the process of converting a new system design into operation. It is the phase that focuses on user training, site preparation and file conversion for installing a candidate system. The important factor that should be considered here is that the conversion should not disrupt the functioning of the organization.

The objectives of this maintenance work are to make sure that the system gets into work all time without any bug. Provision must be for environmental changes which may affect the computer or software system. This is called the maintenance of the system. Nowadays there is the rapid change in the software world. Due to this rapid change, the system should be capable of adapting these changes. In our paper the process can be added without affecting other parts of the system.

Maintenance plays a vital role. The system liable to accept any modification after its implementation. This system has been designed to favour all new changes. Doing this will not affect the system's performance or its accuracy.

V. MODULE DESCRIPTION

NETWORK CONSTRUCTION

The network construction module provides low level socket connection and node initialization with the given information. This module is responsible to get the node information like node name, IP address, Port No. etc from the user and it will establish the connection among number of nodes selected by the user. This module construct, initialize the nodes dynamically using given inputs than it gets ready for the communication.

RANDOM WALK

In this sub module the, the system selects a neighbor randomly to send request query for searching data. And then the node will check that the searching data is available or not. If it is available than it will reply to the sender otherwise it will send to its own neighbor. Like that request query will process till the require data is not found. Actually mechanism uses the depth search algorithm to search the require data. Time Consumption is Very High

FLOODING SEARCH

In this sub module the request query for searching data is send to all the neighbors at the same time and if the required data if available at any of the neighbor, it will give response back to source. Otherwise these neighbors will send the query to their own neighbors again. This process will be continued until the required data is found. Actually this mechanism uses the breadth search algorithm to search the require data. The Network Traffic is increased to the Maximum extent.

PROBABILITY TABLE CONSTRUCTION

It is the module we construct a probability table by using the ProbabilisticFlooding. The information's are stored as the Index file in the Probability Table, so that the data search is made to the Probability Table to find the Best Data Relevant to the query. We can increase the performance by reducing number of query messages and time taken with the help of previous experience.

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PROBABILITY FLOODING

In this Module, Search is made to the Probabilistic Table / Index Table, to fetch the Best Data, which implicitly specifies the Node and the Path to reach the Node. This Module identifies the Node which has the data through searching with the Query made by the user. This process avoids Time loss, reduces Band width and also fetches the data very effectively.

WEIGHING ALGORITHM MODULE

Weighing algorithm is calculated to find the best book in the entire peer group
Once the query is provided to the Probabilistic Table, the Probabilistic Table will consider the index file stored in it & process the query to all the peers. Query key word is called as "Term", after the steaming algorithm is applied to fetch the Key words in each & every file which is stored in all the peers. Once the peer receives the query, the Probabilistic Table calculates the Term Frequency which is achieved by counting the number of occurrence of the Term which the user has queried in each file. So the ratio is calculated by comparing Term Frequency with the total number of Key words. We land up with a value for every document which is stored in the Probabilistic Table. This value is called as Weight of Term in a Book of the particular Peer. All the values are tabled in a Probabilistic Table.

RANKING ALGORITHM MODULE

After getting the corresponding Weight of the term in a book of the particular peer, all the values are tabled for further processing. The scores are compared with each other, to fetch the Top values and it is made in the ascending order. The top valued books are kept in the order. For example Weight of Book 1 in Peer 4 : **0.75**, Book 2 in Peer 1 : **0.70**, Book 3 in Peer 2 : **0.65,** Book 2 in Peer 4 : **0.60** and so on.

VI. CONCLUSION

In this paper we have a tendency to analyzed the impact of heterogeneousness in P2P-based applications on the quantity of queries sent throughout the network by peers that request a resource and on the hit chance for the search method. we have a tendency to conjointly analyzed the congestion of the network once the search algorithmic rule is in a position to overload peers with restricted process capacities. to the present finish, we have a tendency to developed AN analytical model exploiting generalized random graphs to represent the overlay network and incorporating the dependence of peer convenience and non-uniform resource distribution by considering possibilities that depend upon the peer degree. we have a tendency to totally valid the model that showed sensible agreement with the predictions obtained by simulations on real overlay networks obtained from travel a preferred P2P-based file-sharing applications. to the present finish, we have a tendency to developed a distributed crawler impressed to previous work on this subject that's ready to gather Gnutella photograph during a jiffy. we have a tendency to determined attention-grabbing behavior of a straightforward probabilistic flooding algorithmic rule that leads the network to congestion. we have a tendency to conjointly showed that neglecting heterogeneousness ends up in rather completely different results even during this easy settings. what is more, we have a tendency to provided AN example of definition of a posh search algorithmic rule that might be simply analyzed by means that of our techniques.

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