

# A Survey Paper on P2P File Replication in MANET and Cloud

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## ABSTRACT

Now a day's the applications are used mostly and performs various operations in mobile networks or MANETs, because the mobile computing gives the efficiency for query processing in the network and performing communication between node to node or peer to peer. File sharing is the action which provides the sharing of data or file in between peers. That type of sharing is best because it gives the advantage for p2p file sharing without central stations. The central station or server that is not important or usable factor in this point. Querying delay is minimized due to p2p sharing. The existing file protocols give two flaw current file replication protocols in mobile ad hoc networks that are: 1) there is absent of some rules to allocate limited resources to various different sites for minimum querying processing delay. And 2) they consider storage is only the resource for replica, and nothing much. But in actual that storage is also one type of peer and it also has the storage capacity with sharing ability. The node which has higher frequency to meet and having accessibility to files this gives more use in the distributed MANETs.

**Keyword:** - Peer to peer, MANETs, File sharing.

## 1. INTRODUCTION

A Mobile Ad Hoc Network or MANET is a network consisting of a collection of nodes capable of communicating with each other with or without forming a network infrastructure. Each node participating in the network works for host as well as router and must therefore is willing to forward packets for other nodes, so the routing protocol is needed. The most important characteristics of MANET provide the dynamic topology; in which nodes can dynamically changing their position therefore a need of a routing protocol that quickly accepts to topology changes. In this paper for experimental purpose, Investigators considered meters (eg.150\*150) terrain area and illustrate the Drop packet analysis using DSR protocol parameters which perform wireless network scenario. The *Dynamic Source Routing* protocol, a simple as well as an efficient routing protocol is designed and use for use in multi-host wireless ad hoc networks, allows the network to be completely self-organizing ability and self-configuring ability, without the used network infrastructure or the administration interference. All aspects of the protocol work in *on-demand*, permitting the routing packet to overhead and scale *automatically* for only which needed to respond to changes in the different routes or paths in use.

## 2. LITERATURE SURVEY

### ANODR: Anonymous On Demand Routing with Untraceable Routes for Mobile Ad-hoc Networks

In hostile environments, the enemy can run traffic analysis act against routing information embedded in routing messages and transferring the data packets. Allowing selecting the trace network routes and understanding the pattern of motion at nodes, the end of those routes may pose which is the serious threat or problem to covert operations. The purpose of ANODR, it is an anonymous on-demand routing protocol for using MANET network deployed in unsolicited environments. The system finds two mainly related problems: For route anonymity(not known), ANODR prevents strong enemy or problem from tracing back a packet flow to its last node or destination;

for location privacy, ANODR ensures that enemy or problem cannot discover the identities local transmitters' real identity. The ANODR structure is based on "broadcast with trapdoor information", provided by network security which includes features of two existing network and security mechanisms, named the broadcasting and the trapdoor information. The system provides the simulations and implementation to validate the effectiveness of our design.[1]

Anonymous routing in mobile ad hoc networks or MANET has been a several issue for the purpose of security and privacy facts. But there are very few methods to detect malicious nodes and providing a trusty and worthy protection over whole network. In this paper, the system introduce a localized trust management which first function is to remove malicious nodes, and propose an protocol which provide efficient anonymous routing by node that participates in the protocol for encrypts entire message provide trust key and sand Hello to its ancestor in expiration time. The finding of malicious node and it can be detected and isolated from network. That way, a secure route path can be found in an unsolicited environment. Meanwhile, it is able to work efficiently and effectively against the Denial-of-Service (DoS) attack. [1]

### **MASK: Anonymous On-Demand Routing in Mobile Ad Hoc Networks**

The shared via wireless medium of mobile ad hoc networks facilitates passive, enemy eavesdropping on data communications which used can launch various devastating attacks on the target network. To thwart passive eavesdrop and the resulting attacks, system propose a novel anonymous on demand routing protocol, named MASK, which can put effects on communications between both MAC-layer and network-layer without previously known real IDs of the nodes under strong adversary model. MASK offers the anonymity of senders, receivers, as well as sender-receiver relationships into unnodeability and untrackability and end-to-end flow untrace. It is also tolerate to a wide range of attacks. Moreover, MASK protects the high routing efficiency as compared to previous studies. Detailed simulation studies have provided that MASK is highly effective and efficient. [2]

### **Improvise P2P File Sharing for Routing Efficiency**

Now a day's mobile computing is becoming more and more popular. The efficiency of file querying suffers with the properties of networks which include node mobility and limited communication range and resource. File sharing is one of the features which include p2p file sharing over MANET. Main advantages of P2P file sharing are files can share without base stations, overload on server can be avoided and it can exploit the otherwise the pair which is wasted can communicates among mobile nodes. File replication which plays important role in enhancing file availability and reduces file delay for querying. By creating replicas the probability of encountered requests can be improved. Random Way Point model which used for the normal MANET and Community-Based Mobility Model used for disconnected MANETs. The nodes in RWP that are moves with random speed to the points which randomly selected, so the probability of meeting each node is similar for the entire nodes Community-based mobility model which used in some content dissemination or routing algorithms for disconnected MANETs. So models contain resource for file replication, which considers both node storage and meeting frequency. [3]

### **Cluster based Efficient File Replica in P2P Mobile Ad Hoc Network**

Mobile Ad hoc Networks consists of collection of wireless mobile devices that can dynamically forms a temporary network without the use of any existing infrastructure or the centralized administration. Based on the Peer-to-Peer (P2P) network, file sharing is main work in MANET. Design of secured and cooperative cache in wireless P2P networks are present, and solutions to detect the best place for cache where the data. The goal of the work is to improve file availability for effective file sharing in p2p mobile ad hoc network. And also we make analysis of distributed routing protocol DSR and AODV in dynamic peer to peer MANETs with influence of through gateway transmission. [4]

### **Replication: A Technique used for Scalability in Cloud Computing**

Cloud computing is a technology which produce and serves huge and vast amount of data every day. This makes the working of cloud to store tons of applications. Multi cloud environment is used to satisfy these demands. If multiple providers or senders works co-operatively and together, resource availability of can be improved. The replication of data across multiple cloud places has become an effective way to achieve good performance in terms of load balancing, availability as well response time. Replication of data is a good way to achieving of reliability and improving the performance in a distributed manner. The popularity of cloud computing is an alternative to classic or

well-known information processing systems. This uses increased the worth of its continuous and correct and operation even in the presence of faulty components. The fault tolerance is a major point to guarantee availability and fault tolerance of critical services as well as application execution. In order to reducing the failure affects on the system and application execution, dropping should be eventually handled. [5]

### **Classic Replication Techniques on the Cloud**

The limited scalability of cluster-based databases has motivated a new class of storage systems based on the cloud, which favor availability over data consistency to provide highly elastic and the scalable services. The paper presents architecture of the distributed storage that combines a cloud inspired scheme that uses traditional database replication concept to provide transactional support as well as high availability by offering different levels of consistency available when required to the demands of client applications, thanks to a replication strategy based on epidemical updates. System also includes an analytical model for computing the scale out of a distributed system that can be used for adjusting of the configuration of proposed architecture. [6]

### **From cluster databases to cloud storage-: Providing transactional support on the cloud.**

Over the past three decades, technology constraints (e.g., capacity of the storage device, bandwidth of networks) and an ever-increasing set of user demands (e.g., information structures and data volumes) driven the distributed databases. Since flat-file data repositories developed in the early years, there gives important benefits in concurrency control, replication protocols, and transactions management. Whereas the modern data storage describes by technique of Big Data and cloud computing—related to overcome the scalability and elasticity has some limitations of the classic databases—are pushing practitioners to relax some important properties features by transactions, which provides several applications that are unable to fit in this strategy due to their situated transactional nature. The purpose of work is to address two important challenges still latent in distributed databases: (1) the limitations of scalability for transactional databases and (2) providing transactional support on cloud-based storage. Analyzing of the concurrency control and replication techniques, used by classic databases for critical to identify to support transactions, the reasons that make these systems degrade their throughput when the number of nodes and amount of data planes. Besides, this analysis is devoted to justify the design rationale behind cloud repositories where transactions have been generally neglect or ignored. Furthermore, enabling applications which are totally dependent on transactions to taking an advantage of the cloud storage activity is crucial or effective for their adaptation to current data demands and business models. [7]

## **3. EXISTING SYSTEMS**

- 1) In the former, redundant replicas are easily created in the system, thereby wasting resources. In the latter, though redundant replicas are reduced by group based cooperation, neighboring nodes may separate from each other due to node mobility, leading to large query delay.
- 2) There are also some works addressing content caching in disconnected MANETs/ DTNs for efficient data retrieval or message routing. They basically cache data that are frequently queried on places that are visited frequently by mobile nodes. Both the two categories of replication methods fail to thoroughly consider that a node's mobility affects the availability of its files.
- 3) Node mobility, incomplete communication range and resource, have make many difficulties in realizing such a P2P file sharing system.
- 4) Broadcasting can quickly discover files, but it leads to the broadcast storm problem with high energy consumption.
- 5) In spite of efforts, current file replication protocols lack a rule to allocate partial resources to files for replica creation in order to attain the minimum average querying delay, i.e., global search effectiveness optimization with less number of resources.
- 6) Lack of higher ability.
  - Today, we can see that all of the storage is not properly secure it.
  - Means, it is simply accessible of social network sites.
  - Any attacker is easily crack password and accesses all of data.

#### 4. CONCLUSION

We can conclude that, the load distribution over the replica node can be optimized and distribute, the above all techniques are effective for the problem of overloaded crowd conditions on node or node servers. The algorithms can also improves the file querying efficiency and supports to the important qualities of networking concepts that is availability of files and consistency.

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