

Review on Security Of Peer To Peer & Client-Server Network Using XOR Metrics In Cloud Computing

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Abstract— Peer-to-peer networks are less secure than a client-server network because security is handled by individual computers, not on network as a whole. Resources of computers in network could become overburdened as they have to support not only workstation user, but also requests from network users. Within XOR-based metric we provide consistency & performance, latency minimizing routing, & a symmetric, unidirectional topology to peer to peer & client server cloud. Cloud based services & service providers are being evolved which has resulted in a new business trend based on cloud technology. Cloud Computing is a architecture that server resources on distributed scalable platform so as to provide on demand computing resources & services. Cloud service providers offer cloud platforms for their customers to use & create their web services, much like internet service providers offer costumers high speed broadband to access internet. **Keywords**:-peer to peer network,cloud computing,XOR-metrics,client-server network.

I.INTRODUCTION

Peer-to-peer computing or networking is a architecture that distributed application partitions tasks or workloads between peers. Peers are equally privileged, equipotent participants in application. They are said to form a peer-to-peer network of nodes.

Peers make resources a fraction like as disk storage or network bandwidth, directly available to other network participants, without need for central coordination by servers or stable hosts. Peers are both suppliers & consumers of resources, in contrast to traditional client-server model in which consumption & supply of resources is divided. Emerging joint peer to peer systems had been going beyond era of peers doing similar things while sharing resources, & are looking for diverse peers that could bring in unique resources & capabilities to a virtual community thereby empowering it to engage in greater tasks beyond those that could be accomplished by individual peers, yet that are beneficial to all peers.

CLIENT-SERVER NETWORKS

A client-server network involves multiple clients, or workstations, connecting to at least one central server. Most data & applications are installed on server. When clients need access to these resources, they access them from server. Servers often have private user directories as well as multiple public directories. Client-server networks tend to have been faster access speeds because number of large clients they are designed to support. clients are allowed to function as workstations without sharing any resources. It is easier to upgrade software applications & files because they are held on one single computer

System-wide services could be provided through server software. Security is enhanced on a client server network because security is handled by server.

II. CLOUD COMPUTING

Cloud Computing is centralization server of resources a distributed architecture that on a scalable platform so as to provide on demand computing resources & services. Cloud service providers offer cloud platforms for their customers to use & create their web services, much like internet service providers offer costumers high speed broadband to access internet. CSPs & ISPs (Internet Service Providers) both offer services. Cloud computing is a model that enables convenient, on-demand network access to a shared pool of configurable computing resources such as networks, servers, storage, applications that could be rapidly provisioned & released within minimal management effort or service provider's interaction. In commonly cloud given offer three types of services i.e. Software as a Service (SaaS), Platform as a Service (PaaS) & Infrastructure as a Service (IaaS). There are different reasons for a firm\organizations towards IT solutions that include cloud computing as they are just required to pay for resources on consumption basis.

III. REVIEW OF LITERATURE

Petar Maymoukov (2011) Kademia: A Peer-to-peer Information System Based on XOR Metric

We describe a peer-to-peer system which has provable consistency & performance in a fault-prone environment. Routes system locates nodes using XOR-based metric topology that simplifies algorithm & facilitates our proof. topology has property that every message exchanged conveys or reinforces useful contact information. Within its novel XOR-based metric topology, Kademia is first peer-to-peer system to combine provable consistency & performance, latency minimizing routing, & a symmetric, unidirectional topology. Kademia a perfect scale\parameter that lets people trade a constant factor in width for a lowest latency hop selection & delay-free fault recovery. Finally, Kademia is first peer-to-peer system to exploit fact that node failures are inversely related to uptime.

Rabi Prasad Padhy (2011) "Cloud Computing: Security Issues & Research Challenges"

Cloud computing is an architecture for providing computing service via internet on demand & pay per use access to a pool of shared resources namely networks, storage, servers, services & applications, without physically acquiring them. So it saves managing cost & time for organizations. Many industries, such as banking, healthcare & education are moving towards cloud due to efficiency of services provided by pay-per-use pattern based on resources such as processing power used, transactions carried out, bandwidth consumed, data transferred, or storage space occupied etc. Cloud computing is a completely internet dependent technology where client data is stored & maintain in data center of a cloud provider like Google, Amazon, Salesforce.com & Microsoft etc. Limited control over data may incur various security issues & threats which include data leakage, insecure interface, sharing of resources, data availability & inside attacks. There are various research challenges also there for adopting cloud computing such as well managed service level agreement (SLA), privacy, interoperability & reliability. This research paper outlines what cloud computing is, various cloud models & main security risks & issues that are currently present within cloud computing industry. This research paper also analyzes key research & challenges that presents in cloud

computing & offers best practices to service providers as well as enterprises hoping to leverage cloud service to improve their bottom line in this severe economic climate.

Hardeep (2012) KAdHoc: A DHT Substrate for MANET based on XOR Metric

P2P resource lookup systems are widely used in wired networks. within wireless networks becoming widespread through advances in technology, many systems formerly applied in wired networks must now be transplanted to wireless environments. However, intrinsic differences between wired & wireless networks require that these applications be adapted to fit properties of wireless networks. This paper presents KAdHoc substrate, which could be successfully applied in an ad-hoc peer-to peer lookup system. Some problems, such as node mobility & packet loss, occur frequently when peer-to-peer systems are deployed in mobile ad hoc networks, & thus transmitted data becomes outdated easily. Also, neighboring nodes in a virtual peer to peer network may in reality be located far from each other, & limited transmission distance of wireless networks results in lowered network efficiency. KAdHoc presents a modified substrate to overcome these problems. Experimental simulations have shown that KAdHoc not only has faster search times, but also has higher success rates & lower overall flows under conditions of high node density compared to Kademia & Pastry. Success rates are also higher when node speed is increased.

Monjur Ahmed (2014) cloud computing & security issues in Cloud International Journal of Network Security & Its Applications

Cloud computing has formed conceptual & infrastructural basis for tomorrow's computing. global computing infrastructure is rapidly moving towards cloud based architecture. While it is important to take advantages of cloud based computing by means of deploying it in diversified sectors, security aspects in a cloud based computing environment remains at core of interest. This paper presents a review on cloud computing concepts as well as security issues inherent within context of cloud computing & cloud infract.

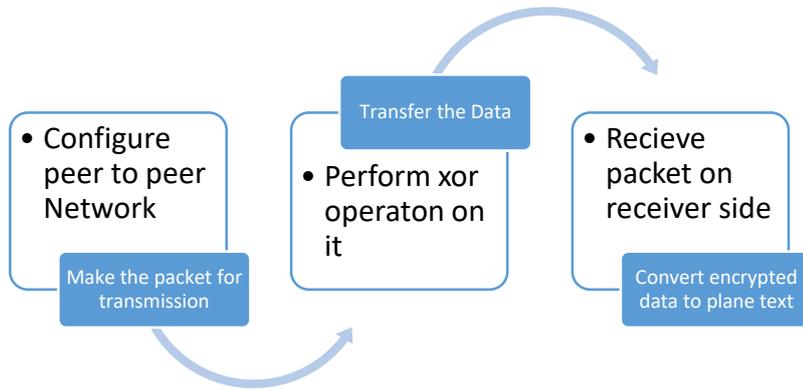
IV. OBJECTIVES

The objective of this research is to provide security to peer to peer & client server based cloud network using XOR matrix. Here in this section we have discussed objectives of research **To Establishment of peer to peer network & perform transmission & client server based network environment & make transmission in client & server. To make use of simple XOR operator in order to provide security to data transmitted in both peer to peer & Client server based cloud environment. To make investigation of limitation to existing security system.**

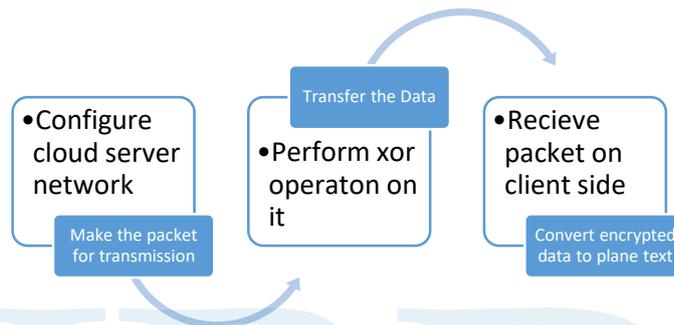
V. PROPOSED WORK

we would provide security to peer to peer and client server based cloud network using XOR matrix

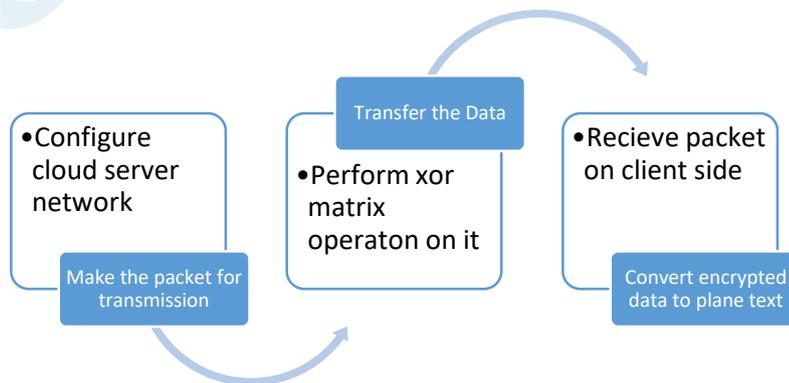
Step1 : Establishment of peer to peer network and perform transmission using TCP protocol.



Step 2: Establishment of client server based network environment and make transmission in client and server.

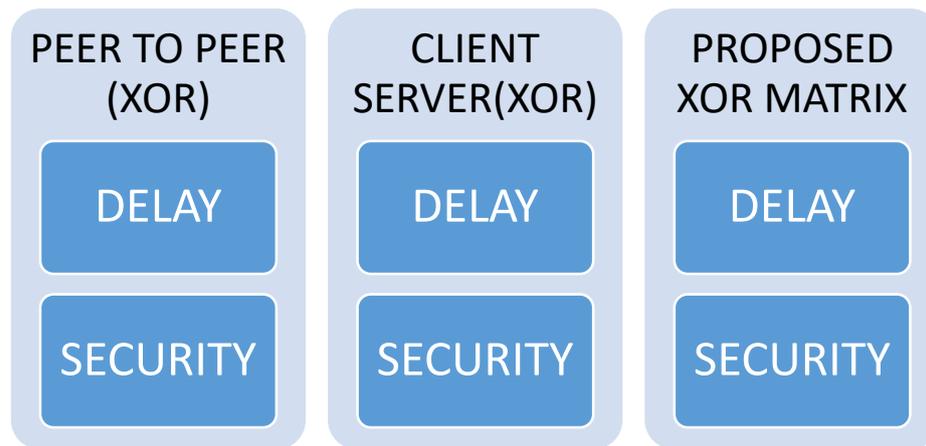


Step 3: Using simple XOR operator in order to provide security to the data transmitted in both peer to peer and Client server based cloud environment.



Step4: Then we would make investigation of limitation to the existing security system.

Step5: Use tradition XOR metric and discuss how it is more secure as compare to previous XOR based encryption.



Step 6 : Upgrade the existing XOR matrix complexity by modifying existing xor matrix based traditional algorithm and discuss the feature of new security system.

VI. CONCLUSIONS

With XOR-based metric we provide consistency & performance, latency minimizing routing, & a symmetric, unidirectional topology to peer to peer & client server cloud. It is also difficult to provide system-wide services because desktop operating system typically used in this type of network is incapable of hosting service. Client-server networks have a higher initial setup cost.

Cloud based services & service providers are being evolved which has resulted in a new business trend based on cloud technology. within introduction of numerous cloud based services & geographically dispersed cloud service providers, sensitive information of different entities are normally stored in remote servers & locations within possibilities of being exposed to unwanted parties in situations where cloud servers storing those information are compromised. If security is not robust & consistent, flexibility & advantages that cloud computing has to offer would have little credibility.

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