

Implementation on Peer to Peer & Client Server using XOR Metric in Cloud Computing

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Abstract: Peer-to-peer networks grip two and extra computers pooling person resources like disk drives, DVD players and printers. These shared resources are available to every computer in network. Each computer acts as both client & server, communicating directly within other computers. On a peer-to-peer network, for example, a printer on one computer could be used by any other computer on network. These networks are inexpensive to set up. All you need is a way to connect them, like an Ethernet cable or a Wi-Fi router.

Keyword: Peer-To-Peer, Coordination, Structured Networks, Cloud Computing,

I. INTRODUCTION

Peers-to-Peer Networks

Peer-to-peer computing and networking spread is a application planning that divisions tasks or workloads between peers. Peers are equally privileged, equipotent participants in application.

Architecture of P2P

A P2P network is planned around notion of the same all together functioning as both "clients" and "servers" to any nodes on network.

Resilient & scalable computer networks

The broadcast nature of peer to peer networks expanding robustness because it eraser single point of failure that could be inherent in a client-server based system. As nodes appear and demand on system increases total ability of system all increases, and likelihood of failure decreases.

II. APPLICATIONS OF P2P

Content delivery

In P2P networks, clients both provide & use resources. This process that not like client-server systemize content serving capacity of peer-to-peer networks could actually increase as more users begin to Faccess content.

III. LITRETURE REVIEW

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

We describe a peer-to-peer system which had provable consistency & performance in a fault-prone environment. Our system routes objection and uncover nodes using a

novel XOR-based metric topology that simplifies algorithm & facilitates our proof.

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.

Monjur Ahmed (2014) cloud computing & security issues in Cloud computing Vol.6, No.1, January 2014

Cloud computing had formed conceptual & infrastructural basis for tomorrow's computing. total computing communication is fast moving towards cloud based construction.

IV. PROPOSED WORK

The objective of our research is to Implement of peer to peer & client server security using xor matrix in cloud computing. Here in this chapter we have discussed establishment of peer to peer network as well as client server security along within security threats.

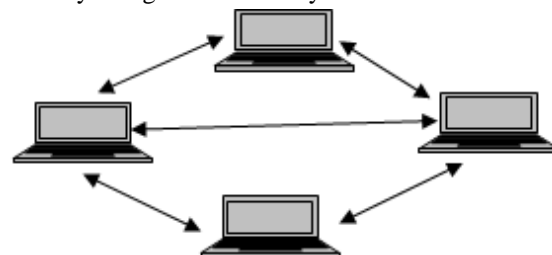


FIG : 1 Peer to Peer Network

Client server Model

A Client server network model is computer network where one centralized & powerful server is considered as a hub to which several low powerful clients known as personal computers or workstations are connected.

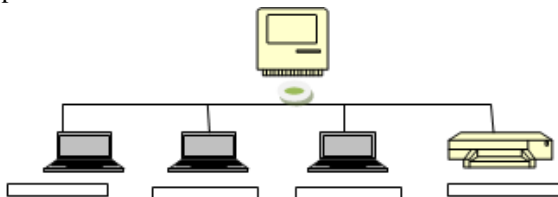


FIG: 2 Client server model

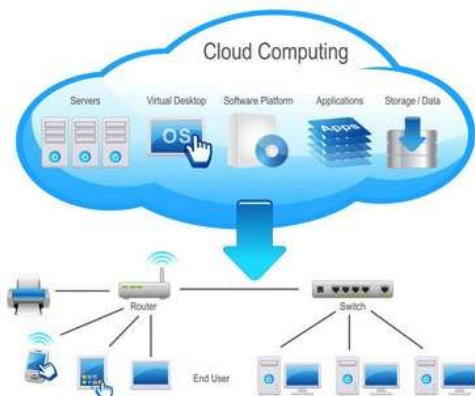


FIG: 3 Cloud computing

Then, could recreate forgotten data when ACK comes within from legitimate connection

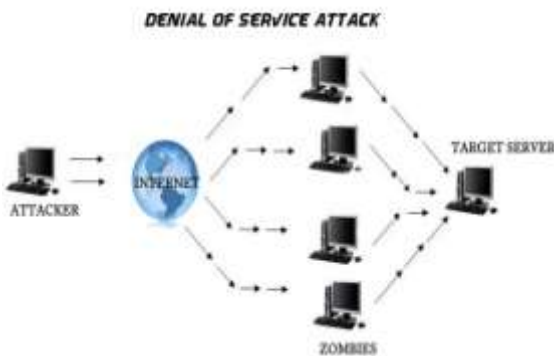


FIG: 4 Denial of Service Attack

V. IMPLEMENTATION

5.1 Server Side Implementation

In this project we have developed a server application as well as client application in Net bean IDE. As shown in following figure:

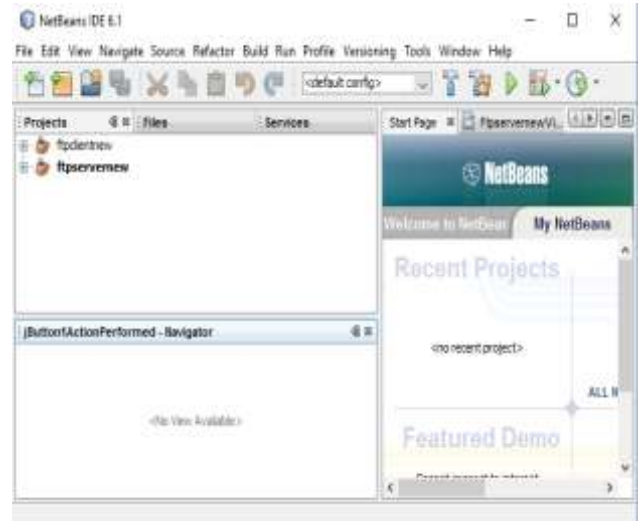


FIG: 5 Client application in Net bean IDE

Following is design view of server side application

Here we have to specify port no , file path , & token (to decode data)



Fig: 6 Design view of server side application

5.2 Client side implementation

Following is design view for file client in order to upload & download data. Here we have to specify port no , file path , ip address of server & token (to encode data)

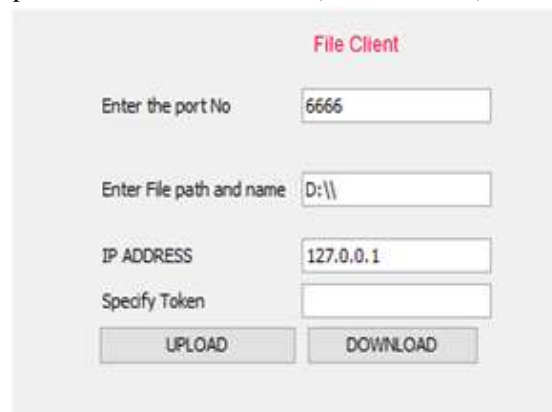


Fig: 7 Design view of client side application

Running application

Here we have to upload nn.txt from client to server.
 Following is nn.txt file.

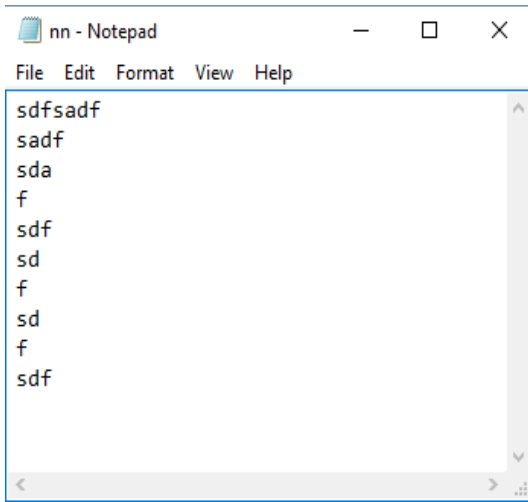


Fig: 5.4 Running application

After running server side module we have to specify port no above 1023 , file path & authorization token.

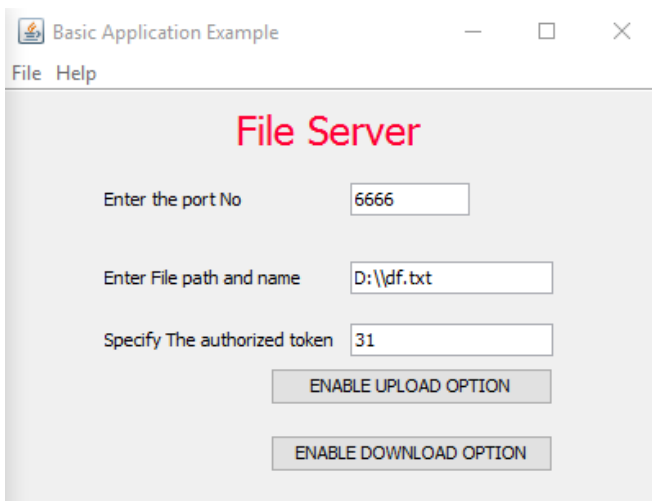


Fig: 8 Running application

After running client side module we have to specify port no 6666 , file path & authorization token. Here we have to specify ip address too to set destination path for file to be transmitted.

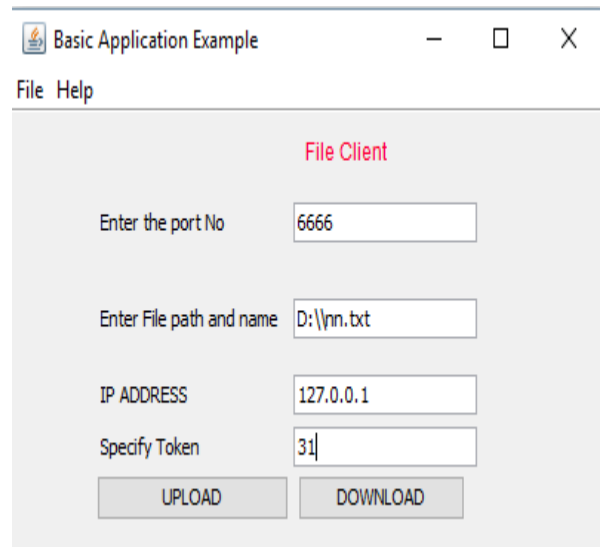


Fig: 9 Running application

file nn.txt is encoded using xor operation first then transferred from client to server.

On receiving end file is decoded again using xor operation & df.txt on server would be as follow:

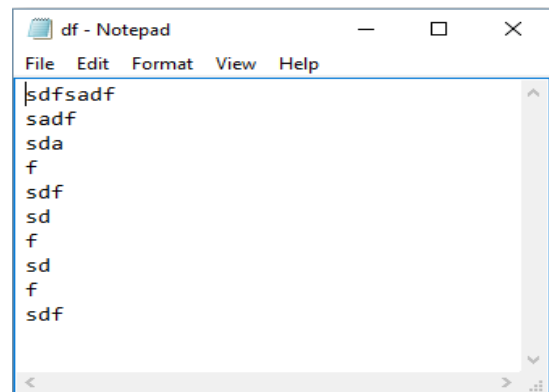


Fig: 10 Running application

Result of output

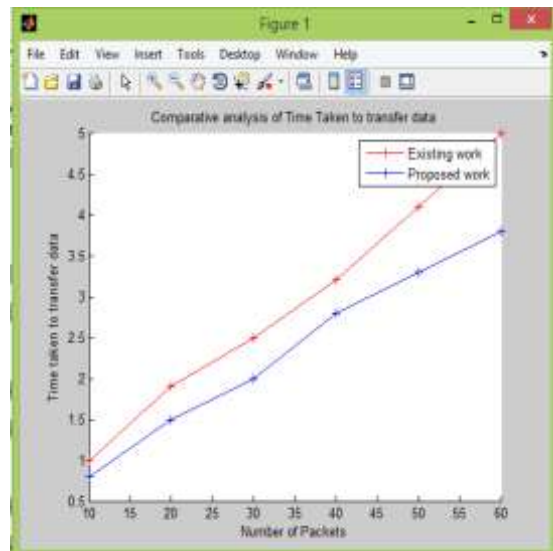


Fig: 11 Comparative analysis of time taken to transfer packet

Comparative analysis of error rates at time of transfer data Result of Analysis

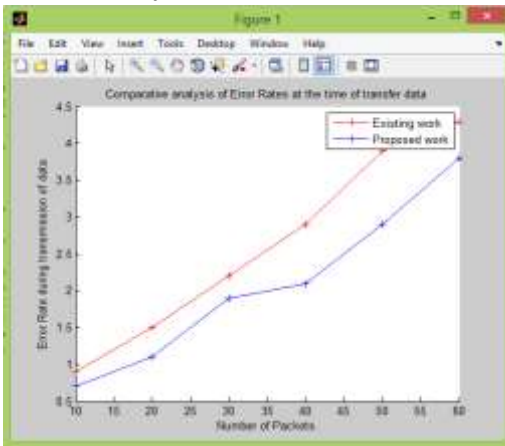


Fig: 12 Comparative analysis of error rates at time of transfer data

5.4 Comparative Analysis Of Packet Size Result

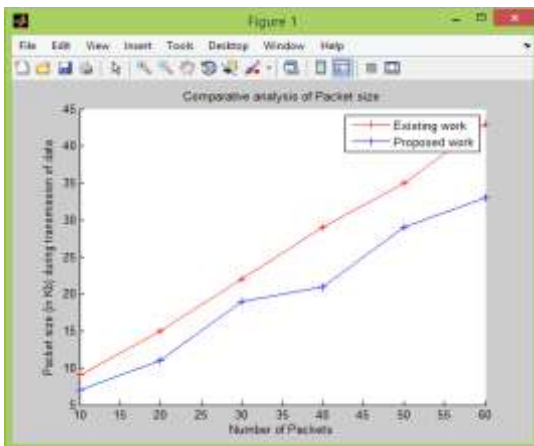


Fig: 13 Comparative analysis of packet size

5.5 Comparative analysis of transmission time in case of secure & unsecured traditional & proposed work

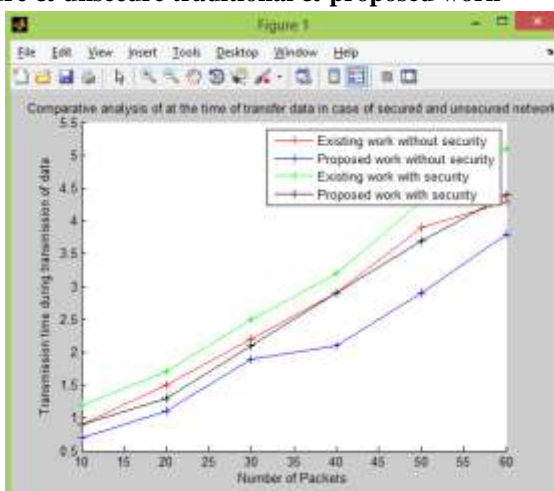


Fig: 14 Comparative analysis of transmission time in case of secure & unsecured traditional & proposed work

VI. CONCLUSION

The conclusion of our research is to Implement of peer to peer & client server security using xor matrix in cloud computing. Here in this research we have discussed establishment of peer to peer network as well as client server security along within security threats. 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. We have tried to make investigation of limitation to existing security system & use tradition XOR metric & discuss how it is more secure as compare to previous XOR based encryption secure as compare to previous XOR based encryption.

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