

IMPLEMENTATION ON BOOSTING DATA TRANSMISSION SPEED OVER NETWORKING

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Abstract:- One line might intersect with another, & then second line goes in a different direction to connect to more lines, & so on & so forth to form a netlike structure. Metaphorically, someone's network remains connected through a series of symbolic ties. Business connections might form due to someone's education, employer, industry or common colleagues. In data packet format, packet type is set by DATA value to identify packet format by neighbour nodes. control packet is used to transmit RTS & CTS packets among nodes to report neighbourhood information. It is composed of seven elements

Keyword: Composed, Symbolic, Computer, Printers, Security,

I. INTRODUCTION

Network Security

Networking is a process that fosters exchange of information & ideas among individuals or groups that share common interests. Networking might fall into one of two categories: social or business. Less commonly in finance, term "networking" might also refer to setting up & operation of a physical computer network. Physically, a network forms interconnecting lines through passages, lines or cables.

Business Networking

In terms of business networking, one of implicit objectives is to form professional relationships that might boost one's future business & employment prospects. Networking events, such as conferences & meetings, are common practice within professional organizations, which might also link up with other bodies to stage a joint event.

Computer Networking

Computer networking involves connecting computers in same building or office so users could readily communicate with other computers or devices. Switches connect multiple devices in one building on same network. Computers, for instance, could connect to printers, fax machines, scanners & servers through a switch.

Types of Attack

A passive attack generally monitors unencrypted traffic & looks for clear-text passwords & sensitive information which could be used in different types of attacks.

Basics Of Cryptography

Basics of Cryptography Cryptography Is Science of information security are called Cryptography. Meaning of Cryptography is "hidden" derived from Greek kryptos. Cryptography means hide information in storage or transit including techniques such as microdots, merging words with image. Cryptography is process of converting plaintext (ordinary text, just as message) using process encryption into cipher text using process decryption.

II. LITRETURE REVIEW

Satish Ms. Sonal Rane Performance Evaluation of Wired & Wireless Local Area Networks International Very large scale integration of complex circuits on to a smaller chip demands for evolution of high speed computer networks. traditional wired network constraints like mobility & expensive cabling. But wireless communication is a flexible data communication system implemented as an extension to or as an alternative for wired communication.

In 2006 Wormhole Attacks within Wireless Networks Yih-Chun Hu, Member

As mobile ad hoc network applications are deployed requirement. We introduce wormhole attack, a severe attack within ad hoc networks that is particularly challenging to defend against. Wormhole attack is possible even if attacker has not compromised any hosts, & even if all communication provides authenticity & confidentiality'

In 2006 Wireless LAN Security Overview was introduced by Ahmed M.

Wireless Local Area Networks (WLANs) are cost effective & desirable gateways to mobile computing. They allow computers to be mobile, cable less & communicate with speeds close to speeds of wired LANs. These features came with expensive price to pay within areas of security of network.

III. PROBLEM FORMULATION

Network delay is an important design & performance characteristic of a computer network or telecommunications network. delay of a network specifies how long it takes for a bit of data to travel across network from one node or endpoint to another. It is typically measured in multiples or fractions of seconds.

Processing delay

In a network based on packet switching, processing delay is time it takes routers to process packet header. Processing delay is a key component in network delay. During processing of a packet, routers might check for bit-level errors in packet that occurred during transmission as well as determining where packet's next destination is.

Delay due to Encryption of data

Let us assume that if A (sender)& B (receiver) want to authenticate to each other then they have to agree upon a key to be used for enciphering & deciphering messages. So steps are as:-

In first step, A (sender)& B (receiver)have to agree on two large prime numbers i.e. n & g.

IV. RESULT & DISCUSSION

In our research we would Establish of Network Environment to test flow of packets then we would make develop of packet sender & receiver module. After that we would test transmission, processing, queing delay in packet transmission.

Comparative analysis of traditional data transmission with proposed work

```
Matlab code for Analysis
x=[10 20 30 40 50 60 70 80];
y=[2 2 3 3 4 4 4 5];
y1=[1 1 2 2 3 3 4 4];
hold on;
```

```
plot(x,y,'r+-');
plot(x,y1,'b+-');
title('Comparative Analysis transmission delay of Proposed & traditional work');
xlabel('File Size Kb');
ylabel('Time Taken Sec');
legend('Traditional', 'Proposed');
```

Result

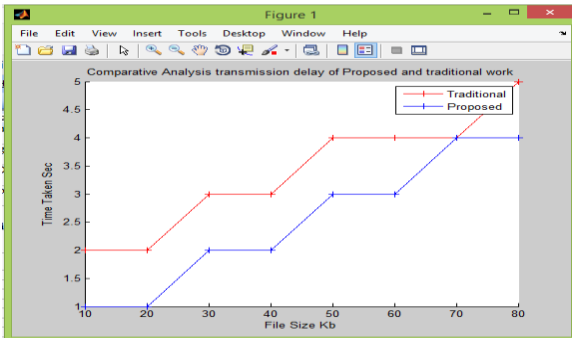


Fig: 1 Mat lab Code For Analysis

mpact on processing Delay

```
Matlab code
x=[10 20 30 40 50 60 70 80];
y=[1 1 2 2 3 4 4 5];
y1=[2 2 3 3 4 4 5 5];
hold on;
```

```
plot(x,y,'r+-');
plot(x,y1,'b+-');
title('Comparative Analysis Processing delay of Proposed & traditional work');
xlabel('File Size Kb');
ylabel('Time Taken Sec');
legend('Traditional', 'Proposed')
```

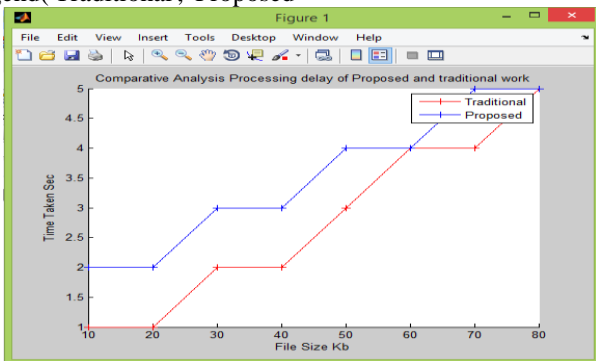


Fig: 2 Impacts On Processing Delay

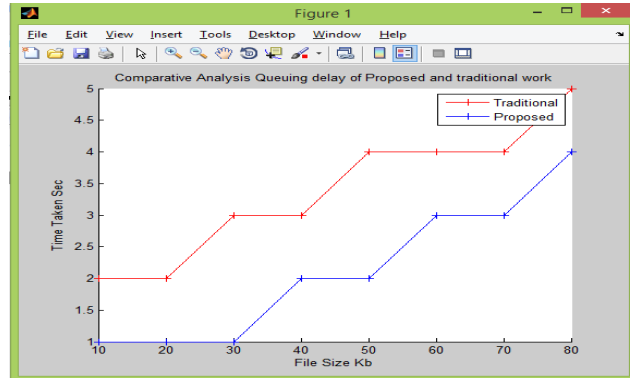


Fig: 3 Impacts On Queuing Delay

Impact on propagation Delay

```
x=[10 20 30 40 50 60 70 80];
y=[1 1 2 2 2 3 3 3];
y1=[1 1 1 1 1 1 2 2];
hold on;
```

```
plot(x,y,'r+-');
plot(x,y1,'b+-');
title('Comparative Analysis Propagation delay of Proposed & traditional work');
xlabel('File Size Kb');
ylabel('Time Taken Sec');
legend('Traditional', 'Proposed');
```

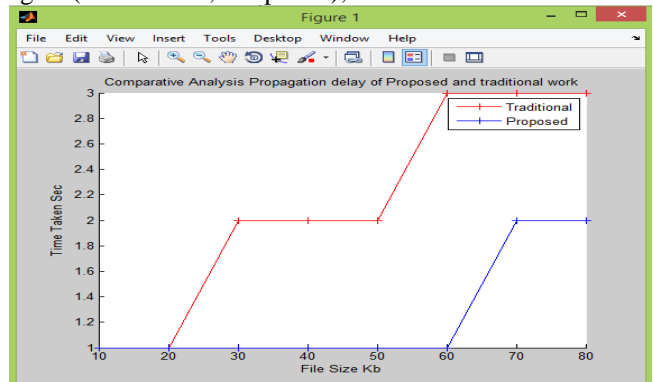


Fig:4 Impact on propagation Delay

V. SCOPE OF RESEARCH

This research is beneficial for both cloud computing. Boosting of data transmission speed is major requirement of day. As number of users or load increases beyond some limit on wireless network could cause collisions among packets sent by users & due to that retransmissions occurs in wireless network which degrade performance. So to improve overall performance of system it is better to use customized data transmission module that would allow fast data transmission on both wired & wireless network. main objective of research is to boost data transmission speed over network without introducing any new hardware.

REFERENCES

[1] Artemios G. Voyiatzis, "A survey of delay – disruption tolerant networking applications", Journal of Internet engineering, Vol 5 no 1, pp: 331-343, June 2012.
 [2] K.Fall, "A Delay Tolerant Network Architecture for

- Challenged Internets”, in Proceedings of ACM SIGCOMM, pp: 27-34, August 2003.
- [3] Evan P.C. Jones, Paul A.S. Ward, “Routing Strategies for Delay – Tolerant Networks”, University of Waterloo, Canada.
 - [4] RFC 4838, V. Cerf, S. Burleigh, A.Hooke, L.Torgerson, NASA Jet Propulsion Laboratory (NASA/JPL), R. Durst, K. Scott, MITRE Corporation, K. Fall, Intel Corporation. , H. Weiss, SPARTA, Inc. “Delay – Tolerant Networking Architecture”, April 2007
 - [5] Lloyd Wood, et. al, “Use of Delay Tolerant Networking Bundle Protocol from Space”, IAC – 08 B2.3.10, Global Government Solutions Group, Cisco Systems, UK.
 - [6] S. Heatly & D. Stokesberry, 'Analysis of Transport Measurements Over a Local Area Network,' IEEE Commun. Mag., June 1989.
 - [7] H. Kanakia & D. R. Cheriton, "The VMP Network Adapter Board (NAB): High-Performance Network Communication for Multiprocessors,' Proc. SIGCOMM '88, Stanford, CA, Aug. 16-19, 1988.
 - [8] K. Sabnani, M. H. Nguyen, & C. D. Tsao, 'High-speed Network Protocols,' 6th IEEE Int'l Workshop on Microelectronics & Photonics in Commun., New Seabury, MA June 6-9, 1989.
 - [9] Tantawy, H. Meleis, M. El Zarki, & G. Rajendran, "Towards a High-speed MAN Architecture," ICC, Boston, MA, June 11-14, 1989.
 - [10] Jacobson, "Congestion Avoidance & Control," Proc. SIGCOMM '88, Stanford, CA, Aug. 16-19, 1988.
 - [11] D. D. Clark, J. Romkey, & H. Salwen, "An Analysis of TCP Processing Overhead," Proc. 13th Conf. on Local Comp. Networks, Minneapolis, MN, Oct. 10-12, 1988.
 - [12] D. R. Cheriton & C. L. Williamson, 'VMTP as Transport Layer for High-Performance Distributed Systems,' IEEE Commun. Mag., vol. 27, no. 6, June 1989.