International Journal of Science Engineering and Advance Technology, IJSEAT, Vol. 6, Issue 3 | ISSN 2321-6905 March- 2018

IJSEAT International Journal of Science Engineering and Advance Technology

Efficient Overlay Nodes Selection for Data Transmission Through Multipath In Network

[1]D.BhagyaTulasi, [2]V.AdityaRamalingeswararao
[1]FinalMaster of Science in Computer Science , Ideal college of Arts and Sciences, Vidyuth Nagar, Kakinada, East Godavari, AP, India
[2]AssociateProfessor,Department of Computer Science, Ideal college of Arts and Sciences,Vidyuth Nagar, Kakinada, East Godavari, AP, India

ABSTRACT:

We control the vital collection of nodes that must bifurcate traffic for attaining the maximum multi commodity net throughput. We put on our optimal node placement algorithm to numerous graphs and the consequences show that a small portion of overlay nodes is adequate for attaining maximum throughput. To conclude, we suggest a heuristic policy (OBP), which enthusiastically controls traffic bifurcations at overlay nodes. In all premeditated simulation scenarios, OBP not only accomplishes full throughput, but also diminishes delay in judgment to the throughput optimal backpressure routing.

KEYWORDS:heterogeneous networks, packet, optimal substructure.

1INTRODUCTION:

Energetic backpressure is known to be an optimal routing policy, but it characteristically requires a similar network, where all nodes contribute in control decisions. In its place, we shoulder that only a subset of the nodes isgovernable; these nodes form a net overlay within the inheritance network. The high-quality of the overlay nodes is shown to regulate the throughput region of the network.

Weadvance an algorithm for taking the tiniest number of governable nodes compulsory to allow the full amount region. We appraise our algorithm on numerous classes of steady and accidental graphs. In the case of random networks with a power-law degree circulation, which is a joint model for the Internet, we find that more than 80 out of 1000 nodes are mandatory to be well-disciplined to qualify the full quantitysection.

From the time when standard backpressure routing cannot be in a straight line realistic to the overlay setting, we ripen experiential allowance to backpressure routing that fixes how to route packets between overlay nodes.

2LITERATURE SURVEY:

2.1every node has to preserve a detached queue for each product in the network and only one file is attended at a time. The backpressure routing algorithm may direct some packets lengthwise very long routes. In this paper, we present solutions to both and recover the delay presentation of the back-pressure algorithm. One of the optional solutions toreduce the difficulty of the queuing data constructions is to be preserved at everynode.

2.2 Peer-to-Peer overlay network is asubmission model without since underlying network topology. But there exists discrepancy problem amongst peer-to-peer overlay network and physical network topology. This origininept transmission or routing between peers in the peer-to-peer overlay network. On the other hand, the status quo will have serious delay in real-time service, for example streaming service. Therefore, in this paper we put forward an upgradinginstrument based on physical network hop information to lessen the transmission cycles to alter the arrangement of peer-to-peer overlay network vigorously.

3PROBLEM DEFINTION:

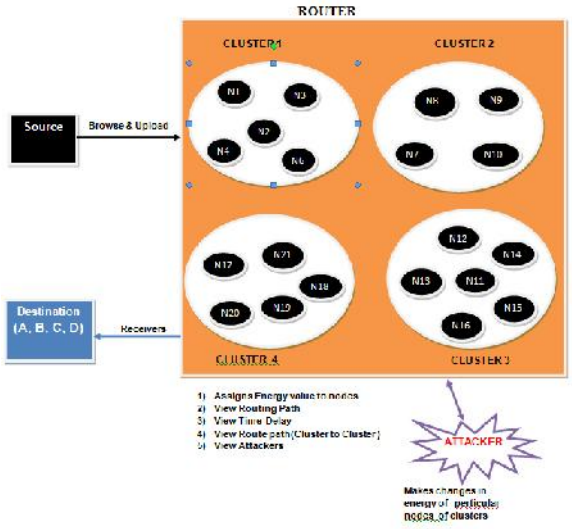
The effort in the existing system reflects the problematic of setting link weights so long as to the Open Shortest Path First (OSPF) routing protocol such that, when attached with bifurcating traffic similarlyamid shortest paths, the network achieves finished- put equal to the best multi commodity flow.

These currentmethods all needcentral control, universal acceptance by all network nodes, or both; thus none of these methodsmightdeliver incremental deployment of amount optimal routing to wireless networks. Furthermore, these methods cannot be used in combination with amount optimal lively control schemes, such as backpressure.

4PROPOSED APPROACH:

The System regulates the indispensableassortment of nodes that dutydivide traffic for accomplishing the extreme multi commodity network throughput. The system applies our optimum node placement algorithm to more than a few graphs and the outcomes show that a slightsection of overlay nodes is necessary for completing maximum throughput. To end, the system propositions experimental policy (OBP), which with passionpedals traffic bifurcations at overlay nodes. In all willful simulation settings, OBP not only reaches full quantity, but also cutssuspension in assessment to the amount optimal backpressure routing.

5SYSTEM ARCHITECTURE:



6] PROPOSED METHODOLOGY:

Source

The Source will peruse the data file and then upload to the particular Destinations. Source will send their data file to router and router will direct to particular Destination (A, B, C…). And if any attackers willmodification the energy of the particular node, then Source will recast the energy for node.

Router

In a router Source can opinion the node details, view routing path, view time delay, view correlation and view attackers. Router will receive the file from the Source and then it will attach to cluster; the all clusters are connects and then send to specific Destination. In a router we can opinion time delay and also routing path.

Cluster

In a cluster the node which hasfurtherdynamism will interconnect first. The Basis will allocate the energy for each & every node. The Source will upload the data file to the router; in a router clusters are triggered and the cluster-based networks, to first-rate the illustrative nodes, and direct to specificTerminuses.

Destination (End User)

TheTerminus can obtain the data file from the Sourcevia router. The Destinations accept the file by without altering the File Contents. Users may accept particular data files inside the network only.

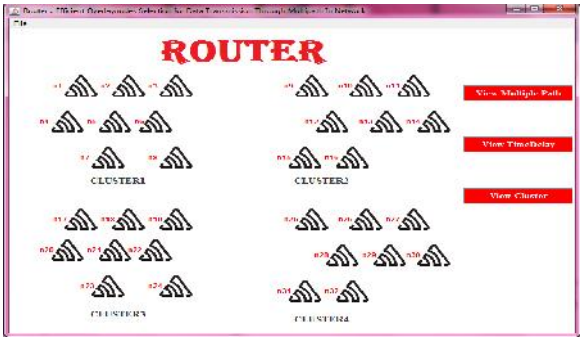
Attacker

Attacker is one who is inoculating the false energy to the consistent nodes. The attacker criticizes the energy to the precise node. After attacking the nodes, energy will be altered in a router.

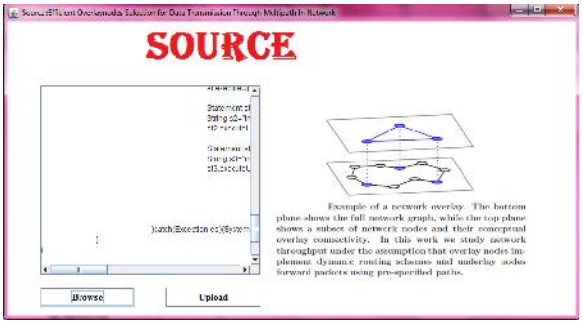
7OVERLAY BACKPRESSURE HEURISTIC ALGORITHM:

INPUT: G, N, E, O
STEP1: remove all attached trees by removing degree-1 nodes recursively.
STEP2: Repeat until no degree-1 nodes remain.
STEP3: All remaining nodes have a degree of at least 2.
STEP4: for the all-paths condition to be satisfied it is necessary to have at least one overlay node on the shortest path to from every leaf node of pruned tree.
STEP5: a shortest path can be formed as a concatenation of shortest paths at overlay nodes which satisfy the leaf node constraint.

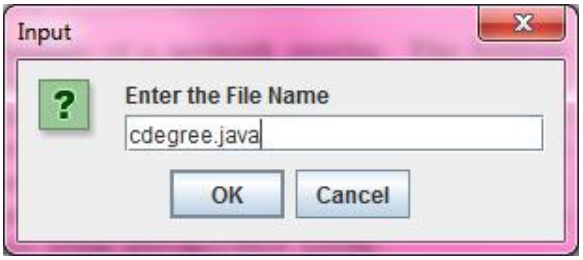
8RESULTS:



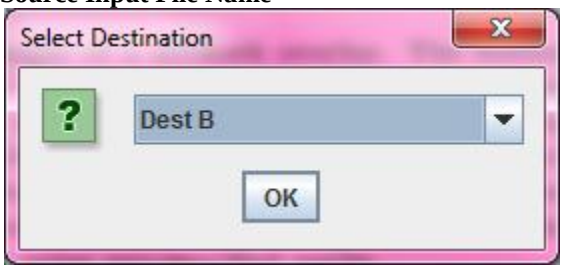
Data is Transfer from Router to Nodes



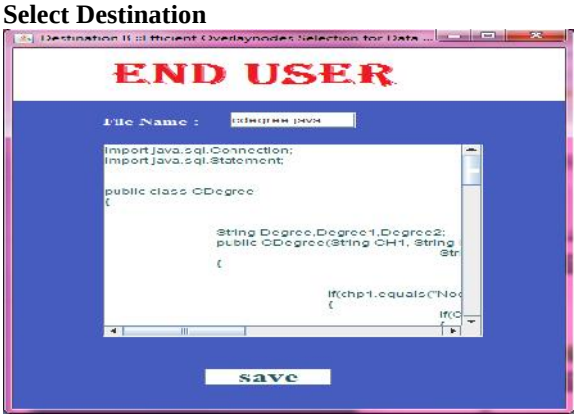
Source: Efficient overlaynodes selection for Data transmission Through Multipath Network



Source Input File Name



Select Destination



User Can save Data from File

EXTENSION WORK:

Advising a safe and sound routing algorithm in cooperation optimize underlay and overlay paths consuming key pre-distribution schemes but not needfulclear trust of other network nodes.

9CONCLUSION:

We suggestanessential and satisfactorycomplaint for the edge node settlement to empower the full multi productquantitysection. Created on this ailment, we create an algorithm for optimumwell-behaved node situation. We create the algorithm on hugehaphazard graphs to illustration that identical often a small numeral of intellectual nodes be sufficient for full throughput. To end, we adviseanenergetic routing program to be effected in a network connection, thatexhibitsgrandershow in terms of both output and deferral.

10REFERENCES:

[1] D. Andersen, H. Balakrishnan, F. Kaashoek, and R. Morris. Resilient overlay networks. In Proc. ACM SOSP, Oct. 2001.

[2] L. Bui, R. Srikant, and A. Stolyar. Novel architectures and algorithms for delay reduction in back-pressure scheduling and routing. In Proc. IEEE INFOCOM, April 2009.

[3] B. Fortz and M. Thorup.Internet traffic engineering by optimizing ospf weights.In IEEE INFOCOM, 2000.

[4] J. Han, D. Watson, and F. Jahanian. Topology aware overlay networks. In Proc. IEEE INFOCOM, March 2005.

[5] W. Khan, L. B. Le, and E. Modiano. Autonomous routing algorithms for networks with wide-spread failures.In Proc. IEEE MILCOM, Oct. 2009.

[6] M. J. Neely, E. Modiano, and C. E. Rohrs. Dynamic power allocation and routing for time varying wireless networks.In Proc. IEEE INFOCOM, April 2003.

[7] M. E. J Newman. Networks: An Introduction. Oxford University Press, Inc., New York, NY, USA, 2010.

[8] L. L. Peterson and B. S. Davie. Computer Networks: A Systems Approach. Morgan Kaufmann Publishers Inc., San Francisco, CA, USA, 4th edition, 2007.

[9] J. Ryu, L. Ying, and S. Shakkottai. Back-pressure routing for intermittently connected networks. In Proc. IEEE INFOCOM, March 2010.

[10] L. Tassiulas and A. Ephremides. Stability properties of constrained queueing systems and scheduling policies for maximum throughput in multihop radio
networks. IEEE Trans. Auto. Control, pages 1936–1948, Dec. 1992.

[11] D. Xu, M. Chiang, and J. Rexford. Link-state routing with hop-by-hop forwarding can achieve optimal traffic engineering. IEEE/ACM Transactions on Networking, 19(6):1717–1730, 2011.

[12] L. Ying, S. Shakkottai, and A. Reddy.On combining shortest-path and back-pressure routing over multihop wireless networks.In Proc. IEEE INFOCOM, April 2009.

DamisettiBhagyaTulasi is a student of Ideal College of Arts and Science Kakinada. Presently she is in Final Master of Science in Computer Science this college and affiliated to Adikavi Nannaya University, Rajamahendravaram, Andhra Pradesh. Her area of interest includes Object-Oriented Programming languages, all current trends and techniques in Computer Science.

VIDIYALA ADITYA RAMALINGESWARA RAO presently working as a Assistant Professor in P.G.Department of Computer Sciences in Ideal college of Arts and Sciences (P.G.Courses) Kakinada. He obtained M.Sc (Computer Science) from Andhra University Vishakapatnam. And he did M.Tech(Computer Science and Engineering) from AacharyaNagarjuna University Guntur. He has lecturership in Computer Science and Applications and has an Experience of 15 years of teaching.