An Adjunct Hash Neighbor in 4 Ways MANETS to Share Data Efficiently

B.Anusha
Department of Computer science and technology
V R Siddhartha engineering college, Vijayawada, A.P, India

K.Pranathi
Department of Computer science and technology
V R Siddhartha engineering college, Vijayawada, A.P, India

S.Kranthi
Department of Computer science and technology
V R Siddhartha engineering college, Vijayawada, A.P, India

Abstract- To share the data in between neighbor nodes in established or fixed MANET is a big challenge. Always displaced movements MANET nodes are unpredictable with respect to their moving places in case of sharing data. And data sharing is late and sometimes hard in between different networks. And also compromised nodes may take advantage to take and hide the data. So to overcome these scenario we propose a new approach called SMN (Smart movement notice), EDT(Efficient data Transfer). And to transfer the data in encoded format we propose a new algorithm ROTA (Rotation orient transfer analog). All these techniques can be used across the MANETs in different networks. The data can be shared via non compromised hash technique in ROTA technique. All the techniques are interrelated with one approach of data transfer in efficient manner. The neighbor nodes displacements are available all the times to all current network nodes and also root or master node. The master node is the key node to transfer the data to other networks in encoded formats. The data can be large and also feasible formats to transfer to legacy networks

Keywords – MANET, SMN, EDT , ROTA, compromised nodes, hashing

I. Introduction

In networks the data transfer should be flexible and safe transfer without any attacks from nodes. The nodes movements will always be available with all our techniques, in the form of hash technique and this is implemented in SMS approach. The data transfer technique is unique in the form of edge nodes (master nodes which are available all the time to all most all moving nodes). Due to this technique there will not be any data loss in any case across the networks. This is achieved using EDT approach. Generally in the MANET data transfer is not with encoding technique, the biggest reason behind this is always data will be shared and transferred in intra MANET networks. But our work is on among the different MANET data sharing. So always compromised nodes will come into action to take the data for their personal purpose and also MIM (man in the middle nodes) may try to attack the traffic. So to overcome our work is done on data in the form of ROTA approach. This approach is totally secure in the form of encoding and auto decoding mechanism.

General properties of MANET: Basically MANET is ever self-configured and less infrastructure network on hand mobile devices with wireless connections. Each node is its own way of displacement and changes links with neighbor nodes keeps changing continuously. The major challenge in building MANET is equipping each node to ever running and maintains the configuration is mandatory to route the traffic. These kind of networks will operate on self-networks or may be connected to legacy and other larger networks. They will be having more than 1 transceivers across nodes, which results in huge and autonomous topology.

These MANETS will be having routable network environment. And these kinds of networks contain P2P, self-equipped and self-healing with handshaking with master node mechanism. Among all available manets

(VANETS, SPANS, iManets) our work is mainly on focusing with VANETS and SPANS. So this paper is having scope of extending with legacy infrastructure and migration with low cost mechanism.

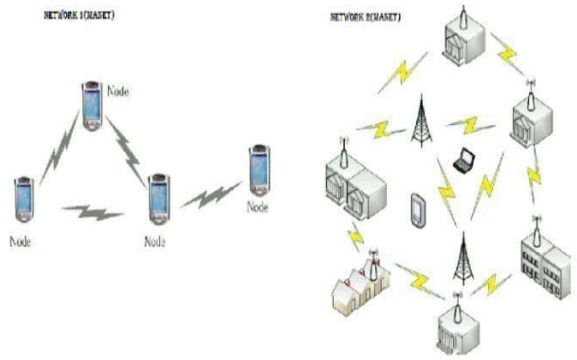

Figure1-Architecture of network

SMN(MANET design) approach: –

II. PROPOSED ALGORITHM

This design is unique with respect to all our approaches. Always nodes will be moving in non-fixed and non-calculated displacements mostly in the form of ad hoc mechanism. The reason of non-fixed in real time human mobile movements any network cannot predict neighboring node movements except the root or master (central node). So the SMN technique is the one which is used to track the node movements in the hashing mode. All nodes will be aware of adjacent neighbouring nodes and their movements in the form of hashing technique. The main usage of this mechanism is whenever the source node from one MANET to other if the attacker tries the data form the stream and out of network boundaries the neighbor node is always takes active part to over the above 2 scenarios. The hash technique is unique in this work to know the most prominent displacements of the neighboring nodes. This is dynamic mechanism in tracking the live movements. In the form of transferring the data the duplicate copy of data will be logged at the central node source MANET for further retransmission in case transmission failure. This technique is alive till the destination gets the data acknowledged transmission in encoded format i.e. 3rd approach in this current work. Due the formation of nodes is dynamic, the tracking of log information (bytes transferred, source node information, time of transfer, destination MANET and node information) will be all time available at central or master node of source MANET. For each network formation the nodes size may vary and SMN will framing hashing and log maintenance.

Algorithm:

Step1: ψ=0; node initialization

Step2: for ψ=0: n node range.

START

Step3: DATA ←data structure

Step4: CONBCTION⇐$\sum_{0}^{m} DATA$

Step5: TRANSFER (S ⇔ D)

Step6: DALERT (K) bytes

Step7: $\int_{S}^{D} \leftarrow K$

End

EDT(Efficient data transfer) algorithm:

In this approach our aim of work is mostly concentrated on efficiency of data sharing and transfer over the networks. The biggest challenge with legacy networks and non-tracked nodes. So to over this kind of issues whenever the source is fixed for transmission, it can keep the data with the adjacent nodes and also with master node

using SNM the EDT will save the data in the form of index model and proper understandable format to destination. And it always tries to handshake with master node to track the destination (which is part responsible work or master node). So there is less chance in losing the data transfer. With this kind of tracking the adjacent nodes also will be aware of the data transfer coz of known movements. The 2 way acknowledgment of transfer will be maintained as log information at central node. Once the transfer is successful and for next iteration of MANET maintenance the log will be flushed coz of the source is no longer is existing with previous attributes. This will help full for fresh indexing with log information. In the data transmission always edge node and master node is final source point though the actual source is selected one and live displacement node. This is the reason though the selected node is out of network range the edge or master node will take active as responsive master node to flush and share the data to destination. And also edge node is main responsibility is to keep track of availability of destination node.

$M_m \leftarrow Normal\ OS$

$V_m \leftarrow Virtual\ machine$

For k = 0: n //n transmits, auth with log

START node

COMN ($M_m \Rightarrow V_m$)

$\text{Lg}\left[\int_0^K DISP(M_m)\right]$

$\text{Lg}\left[\int_0^K DISP(V_m)\right]$

END node

B. Rota algorithm –

This paper is totally independent on existing infrastructure and inventing new architecture which is easily available to other network migration and also easily configured and self-equipped one. So by considering existing MANET features this work mainly extended with the features of configuration and unique node movement mechanism which can be tracked all the time in most networks. All unique approaches and algorithms in this paper are checked with cross platforms mechanisms. The simulation work is tested and implemented on VPN with respect to legacy OS on self-configured pcs like virtual machine to general machine infrastructures. Total work is which is unique and closely related to MANET data transfer with high secured with feasible speed over the topologies.

Rota: This is with both encoding and decoding techniques with unique approach. It encodes all general characters and number with special symbols. First all the data will be converted into asci and after that to byte array. Taking each and every ascii converted character , number and special extended asci will be masked with right shift with 03F.

Ex: Asci('r')>>03F

Followed by result will be converted to character and result will be framed in sequential form. Considering the data with n size of data to be encoded. Iterate it with n times from 1 to n by taking count among whole data. Each individual character will be masked and will be right shift with 2. After this result will be padded to asci array and the whole data will be converted to byte sequential array. In case of special characters the data will be masked in different passion. On whole loop with comparison if special character found, this will be padded converted with byte array directly and right shift with 3 and masked with left shift with 4. The whole approach will be reversed with the decoding technique.

P ←Peer node

K ←nearest neighbour node

N ←data to transfer

Step1: START

Step2: FIND (N $\sum_{2}^{1} P \leftarrow K$) //FIND function

Step3: $P_{P1} \Leftarrow K(1)$

Step4: $P_{P2} \Leftarrow K(2)$

Step5: $MOV(F_P) \Leftarrow$ DISP(N $\Leftarrow K$)

Step6: ROTA (K)

Step7: $SEL(D) \Leftarrow$ TRAS(DATA(N))

End

III. EXPERIMENT AND RESULT

The entire work is tested and checked the output with respect to load balancing in the form not linear data. Smooth transmission is available between boxes of communications and transferred bytes of perfect log vector.

The main result is always feasible in communication from p2p as edge mechanism. So log is always helpful for future grip to start up the communication iterations to overcome the previous log issues .This is folded technique which is new and innovative approach in entire network transmit analysis. The packets of 96% of success rate reached practically with all boxes of communication.Legacy (languages, versions networks, frame works) communication (version low and version high) is always imp active point in the transmission. No passive communication is available due to fixed peer address and dynamic destinations with less threat of man in the middle attacks.

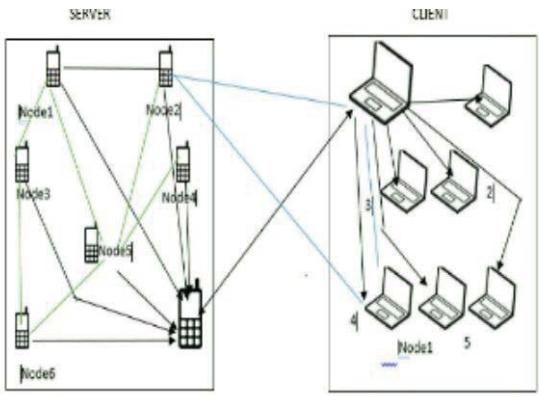

Figure 2: the architecture of network1.

Results Sequence:

1. Dynamic ad hoc network framing with our unique SNM framework at source box(s).
2. Dynamic ad hoc network framing with our unique SNM framework at destination box(s).
3. Node selection for source for source box and node selection for destination box. Ex: 2 ->67 among n nodes of ad hoc network simulation is 2 peer as source node at source box and 67 peer as destination node. So nearest neighbours for 2nd node are the know informative to passers to edge admin.
4. Take data packets and get the asynchronous transmission to transmit the data.
5. Log updations are auto incremented with our framework.
6. Display nearest neighbours for source and destinations with trustworthy energies.
7. This ends up smooth transmission with the dynamic calculation of dynamic transmission.

Energy Level Diagram:

This is the generated graph diagram by taking the energies and here are the inputs for this process of transmission.

Inputs: Manet(peers) size: 23

SourceNode : 2
Destination Node : 6
Selfish Node : 4

Figure 3.-Node Movements

Graph generation:

When data is not transferred

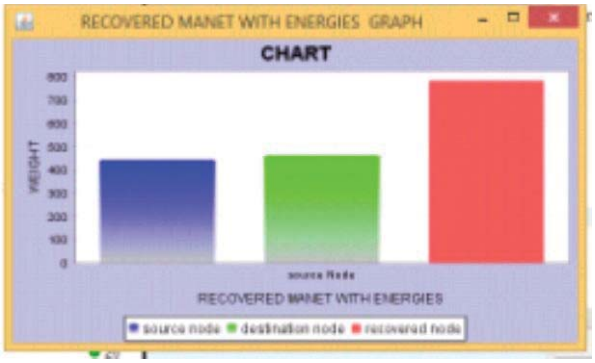

Figure 3.Graph showing energies when data not transferred

When data is transferred

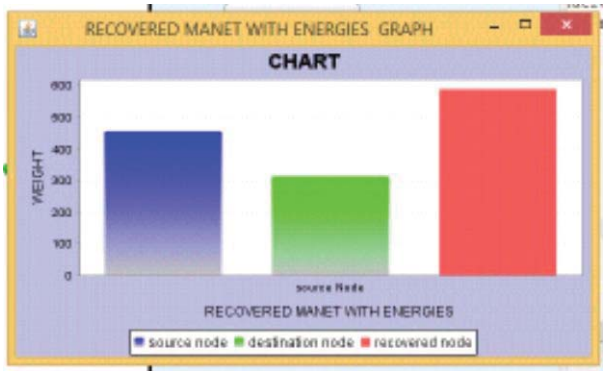

Figure3. Graph showing energies when data is transferred

IV.CONCLUSION

The paper and work can be extended mainly on the basis of 3points.

- The Log maintenance with respect node displacements and re-equipment of the node formation.
- The data can be transferred in concurrent way to other networks with the help of master nodes.
- Re configuration of network nodes is highly unique with the previous configurations.

REFERENCES

[1] Q.He, D.Wu, and P.khosla, "SORI: A secure and objective reputation based incentive scheme for ad-hoc networks," in Proc. IEEE WCNC, 2004, pp. 825–830.

[2] H. Janzadeh, K. Fayazbakhsh, M. Dehghan, and M. S. Fallah, "A secure credit-based cooperation stimulating mechanism for MANETs using hash chains,"Future Generation Comput. Sys. vol. 25, no. 8, pp. 926–934, 2009,

[3] I.Stoica, R.Morris, D.Liben-Nowell, D.R.Karger, M.F.Kaashoek,F. Dabek, and H. Balakrishnan, "Chord: A scalable peer-to-peer lookup protocol for Internet applications," IEEE/ACM Trans. Netw., vol. 11, no. 1, pp. 17–32, 2003.

[4] "The network simulator NS-2," [Online]. Available: http://www.isi. Edu/nsnam/ns.

[5] WiMAX Forum, "Requirements for WiMAX peer-to-peer (P2P) services," Tech. rep., 2012.

[6] J. Choi, K. Shim, S. K. Lee, and K. L. Wu, "Handling selfishness in replica allocation over a mobile adhoc network replica allocation over a mobile adhoc network, "IEEE Trans. Mobile Comput., vol. 11, no. 2, pp. 276–291, Feb. 2012

[7] K.Balakrishnan,Deng,andP.Varshney,"TWOACK:Preventing Selfishness in mobile ad hoc networks," in Proc. IEEE WCNC, 2005, pp. 2137–2142.

[8] Z. Li and H. Shen, "A hierarchical account-aided reputation management system for large-scale MANETs," in Proc. IEEE INFOCOM, 2011, pp. 909–917.