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Computer Communications and Networks

Project Proposal

Self Healing LAN

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Abstract:

As we ~~all~~ know in a network, every node ~~in the network~~ is associated with the success or failure ~~or~~ to send information across the network. ~~sending the information.~~ There are two types of failure which may present in any network. ~~There can be two basic types of failures present in any network:~~ The first error ~~First~~ is the physical error, which ~~that~~ is associated with the connectivity ~~in~~ the network topology. The second error is the logical error that is associated with every node ~~on~~ in the network. Some errors on the node may prevent the node from transmitting the ~~data acrossdata~~ across the network, using desired ~~route.~~

~~There can be errors on the node which will prevent it from transmitting data across the desired route. In~~route. In this project we aim at creating a self replicating worm that can heals the logical error associated with each node.

In the ~~self~~ healing local ~~wide~~ area network there is a group of nodes which ~~forms form a~~forms a particular network topology. At the occurrence of the failure, we would try to establish a delay time period associated with that node in the network group. In ~~the~~ similar manner, a delay time period will be calculated ~~found out~~ for other existing nodes of the local area network. We attempt to initiate a self healing fault restoration activity from each node of the network.~~:~~ Failure recognition is done by monitoring the delay period associated with each node. If the timer is over, it means a failure has occurred. ~~after the delay period associated with that node is passed which means that a failure has been recognized.~~ All the nodes of the network will initiate to restore faults at successive delayed instants. Every node in the network will be associated with the routes ~~is it~~ it is participating in and also the delays period of the node associated with different network groups.

Manual detection of faults and efforts to restarting the messages are time consuming and it is error prone. To avoid these, there is a need to have a system that is capable of both detecting failures in distributed manner and automatically repairing them without human intervention. This can be achieved by creating worms that replicate themselves on additional machine that performs system functions. Our goal is to create a self-replicating code that can be used on the nodes within a Local Area Network. The worm should be able to provide automatic fault detection and restoration on any node in the network.

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1. PURPOSE