A STUDY OF MOBILE IP AND ITS SECURITY ASPECTS IN A LAN ENVIRONMENT

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ABSTRACT

Mobility, is the ability of a node to change its point-of-attachment from one link to another, maintaining all existing communications and using the same IP address at its new link. This is a new solution meant for a mobile node that might be utilising applications that may not be interrupted when the mobile node moves from one link to another. Mobility allows mobile node to communicate even distances away without restarting any applications in use.

The mobile IP involves two-part solution comprising the Mobile IP Agents and the Mobile Nodes. When a user needs to use the mobile IP, the home agent and security information are selected. Security is a pertinent aspect of the mobile IP architecture. Every time a mobile node moves and attempts to register with its home agent, an authentication scheme is implemented to verify the identity of the mobile nodes. The algorithm consideration is sine qua non in setting-up the whole network system allowing the mobile devices to move freely among sub-networks. A security criteria, outlines the authentication algorithm and key to be used during the registration process.

Each mobile IP agent needs a different application and independently configured. Therefore, a thorough research is to be accomplished in order to produce the mobile IP to the extent of the security features and the algorithm.

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CHAPTER 1

PROBLEM DESCRIPTION

1.1 Background Of The Problem

Host mobility is an important issue owing to the proliferation of the development of wireless network interfaces and the growth of internetworking [NEW97]. It allow users with mobile nodes to get connected to the network even from distances away from the home agent.

Basic functions of the mobile node is to enable users to move about, communicating with each other expecting and obtaining the highest level of service from their mobile host and the network anytime. With each change in location or type of network use, the protocols and applications on the mobile host and on other hosts with which the mobile host is communicating should be able to adapt to the new characteristics of the mobile host's network connection [MON97]. The mobility function of the mobile node should allow a node to change its location from one link to another while maintaining all existing communications and using the same IP address at its new link.