

IMPLEMENTATION OF LOCAL AREA NETWORK (LAN) AND BUILD A SECURE LAN SYSTEM FOR ATOMIC ENERGY RESEARCH ESTABLISHMENT (AERE)

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ABSTRACT

We live in age of modern science. Computer Network is the best innovation of Modern science. A local area network (LAN) is a computer network within a small geographical area such as a home, school, computer laboratory, office building or group of buildings. A LAN is composed of inter-connected workstations and personal computers which are each capable of accessing and sharing data and devices, such as printers, scanners and data storage devices, anywhere on the LAN. LANs are characterized by higher communication and data transfer rates and the lack of any need for leased communication lines. A high-quality and correctly dimensioned network infrastructure is essential for all well- functional IT system. A Local Area Network based network can ensure high speed as well as high quality network. To fulfill the current requirements of AERE (Atomic Energy Research Establishment) considering its smooth operation of high speed internet service, LAN based network is the state-of-the-art network solution. A LAN network design refers to the specialized processes leading to a successful installation and operation of a network which includes determining the type of communication system(s) which will be carried over the network, the geographic layout, the transmission equipment required and the fiber network over which it will operate. The purpose of this Network is to design a Local Area Network (LAN) for AERE (Atomic Energy Research Establishment) and implement security measures to protect network resources and system services. To do so, I will deal with the physical and logical design of a LAN. The goal of this Network is to examine of the Local Area Network set up for AERE and build a secure LAN system.

KEYWORDS: *Secure LAN, Operating Wavelength, Route Planning, Planning & Deployment, Network Design, AERE*

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