Securing wide area networks using vpns

SESSION (2013-2015)

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SCHOOL OF PROFESSIONAL ADVANCEMENT
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DEDICATION

DEDICATED TO OUR RESPECTED PARENTS AND FAMILY WITHOUT WHOM NONE OF OUR SUCCESS WOULD BE POSSIBLE.

ACKNOWLEDGEMENT

We are thankful to **Almighty Allah** who gives us valor and passion to complete our project work that was very necessary for degree. Working on this project (Securing Wide Area Network using VPNs) was great source of mighty knowledge to us. We would like to express our sincere gratitude to Prof. Mr. Imran Ahmad for his help and precious support during the course of this project work. We also very thankful, support and motivation received from all faculty members and colleagues. We would also like to say thanks to our parents for their love, support and countless prayers throughout our lives.

We would like to concede our program head Mr. Imran Salem, and head ofdepartment,School of Professional AdvancementDr.NaveedYazdaani, UMT Lahore for encouraging and providing facilities throughout the project.

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This project is submitted to the School of Professional Advancement, University of Management & Technology Lahore, for the achievement of the prerequisite for Master Degree in Information & Communication Technology.

Approved on: _____

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ABSTRACT

The main theme of this project is securing wide area network usingVPNs.Virtual Private Network architecture basically provide WAN connectivity, availability, reliability, scalability and security to manage the private network data of acompany to over an unsecured/untrusted public infrastructure like internet.The IPsec VPN made some revolutionary changes to secure and protect the private data which transporting over public network and also it is a growing technologyin even securing WLAN. VPN ensure the use of corporate network services foran end users to work at home, or at a branch office with the help ofusing the internet. VPN provides point to point connection betweenend user computers or deceives with corporate servers. It has three basic elements which is called CIA: Confidentiality of the Data, Integrity of the data and Availability of the data.

Now a day's corporate industry requiresbest remote accesses of their network resources through the internet with implementation of a cost-effective and secured network connectivityon even safe and sound communication among computer systems.it isusually established a secure tunnel technologies means data must beenencapsulated or wrapped (packet into packet). IPsec is one of the bestmethods of creating an encrypted,authentic connectionbetween the source and destination using logical tunnels.

This project deals with, dissimilar features of IPsec VPN, for instance the accomplishment of IPsec VPN, scalability and security. Even though, IPsec provisions a secure data transfer technique over the internet.

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1. INTRODUCTION

1.1 PROJECT OVERVIEW

The virtual private network (VPN) is the form of technology using a less secured network and creating an encrypted connection over that network. The advantage of this kind of security entails the assurance of appropriate security level to the connected systems, in the condition when the infrastructure of respective network is unable to provide security alone. The use of VPN is justified over private network in terms ofreduced cost. The most commonly used VPNs are site-to-site VPNS and remote-access VPNs.