

Network Security by Implementation of VLAN's and Firewall



SESSION (2015-2017)

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**SCHOOL OF PROFESSIONAL ADVANCEMENT
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A decorative border resembling a scroll, with rounded corners and a vertical strip on the left side that looks like the edge of a rolled-up document. The scroll is outlined in black and has a light gray shadow on its left edge.

DEDICATION

DEDICATED TO MY RESPECTED PARENTS AND FAMILY WHOSE UTMOST LOVE, CARE AND STRUGGLE AGAINST ALL ODDS BROUGHT ME TO THIS HEIGHT OF KNOWLEDGE AND ENCOURAGED ME TO COMPLETE THIS DEGREE AND WERE MAJOR DRIVING FORCE BEHIND MY ALL EFFORTS WITH THE BLESSINGS OF ALMIGHTY ALLAH

ACKNOWLEDGEMENT

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This project is submitted to the School of Professional Advancement, University of Management & Technology Lahore, for the partial fulfillment of the requirement for Master Degree in Computer Science.

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ABSTRACT

Information technology is a basic tool for an organization to gain the competitive advantage and also give survival in the market. Every IT base organization requires network security, to monitor and control their network resources.

Network Security is extremely dynamic and wide in scope. The implementation of this project is to provide the network security, having following features like control on the network traffic, network segmentation, blocking unauthorized users or a network to access the network resources by implementing VLAN's and Access Control List on cisco switches, routers and firewall.

Cisco router's providing connectivity routing between different departments. We will control traffic on router by adding ACL's, for block and authorize network traffic.

VLAN's implement on the cisco switch, VLAN's are providing segmentation between different departments. We can add multiple VLAN's on one switch.

All different kind of network devices/media is interconnected in the network to provide or facilitate users to communicate with each other by computer network technology.

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INTRODUCTION

1. INTRODUCTION

1.1 Project Overview

The Overview of the project shows the experience of developing the concurrent network. To develop a manageable network which having controls on the network traffic. In this network system we can manage users and computers and other applications. In this project we will implement routing protocols to enhance the existing project. At the end of this project, we will have a managed network for the organization.

- Problems or Overview Statement
- Customer
- Goals
- System functions
- System attributes

1.2 Problem Statement

The existing network facing different problems like unmanaged switches having single broad cast domain, no user monitoring, no segmentation, no control on the traffic filtering which is going to servers and no centralized control on the network.

1.3 Affected Groups

- IT Department
- Accounts
- HR & Marketing
- Production
- Administration
- Customers

This may include users as well as support groups