ANALYSIS OF NETWORK THREATS THAT EFFECT THE BANDWIDTH UTILIZATION IN UniMAP STUDENT CAMPUS

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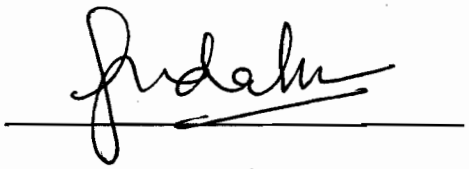
(Signature) : 

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ABSTRACT

Threats can happen everywhere. Same goes to the IT environment where the networking part is the most critical. It is because; network threats like viruses, spywares and forbidden application are using the network to launch the attack silently. A study has been done in Universiti Malaysia Perlis (UniMAP) where one of the student hostels is identified for the place to do the network analysis. The hostel name is Kolej Kediaman Tan Sri Aishah Ghani (KKG) located in Wang Ulu, Perlis. The students have been complaining that the network quality is going very slow and they cannot access to the internet and the internal application like UniMAP Portal, UniMAP website and email smoothly. To overcome this, a network security appliance is obtained to perform the network traffic analysis in order to identify the type of network activity that has congested the KKG network system. A network policy has been applied to deny any unwanted threats, forbidden application usage and access to the bad host.

ABSTRAK

Ancaman berlaku dimana sahaja. Ini termasuk lah dalam teknologi IT dimana sistem rangkaian adalah yang paling kritikal. Ini kerana, ancaman rangkaian seperti virus, spywares dan aplikasi larangan menggunakan saluran sistem rangkaian untuk melancarkan serangan dengan senyap. Kajian telah dilakukan di Univerisiti Malaysia Perlis (UniMAP) di salah satu kolej kediaman pelajar untuk melakukan analisa ke atas sistem rangkaian disana. Kolej tersebut bernama Kolej Kediaman Tan Sri Aishah Ghani (KKG), terletak di Wang Ulu, Perlis. Para pelajar telah merungut dimana tahap kualiti sistem rangkaian di KKG telah menjadi begitu perlahan dan mereka tidak boleh akses ke internet dan aplikasi dalaman seperti Portal UniMAP, laman web rasmi UniMAP dan email dengan lancar. Bagi mengatasi masalah ini, sistem peranti sekuriti rangkaian akan di pasang untuk melakukan analisa ke atas sistem trafik rangkaian untuk mengenalpasti jenis-jenis aktiviti rangkaian yang telah menyesakkan sistem rangkaian KKG. Polisi sekuriti rangkaian telah dilaksanakan to menyekat sebarang ancaman rangkaian, penggunaan aplikasi rangkaian dan akses ke laman web larangan.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter explains the main parts of this study including the background of the study; the objective of the study, the research problem, and the research scope. This chapter also presents a brief description of the methodology being used to conduct this study and the significance of the study.

1.2 Background of Study

University Malaysia Perlis (UniMAP) is one of the local universities in Malaysia that focuses in the engineering and technology field where the vision is to be an internationally competitive academic and research institution. Parallel to the university's vision, an efficient internet connection is very crucial in order to help the students, lecturers, and researchers collect new information as well as share and disseminate it among their communities.

Students at UniMAP are now able to access the library using online services such as IEEE Explore, SpringerLink, ACM Digital Library, ScienceDirect, EBSCOhost and other online services which are available to the students in UniMAP and it is accessible from any location within the university's

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