

**NETWORK SECURITY MANAGEMENT AUDIT AT UUM  
COMPUTER CENTRE**

**A thesis submitted to the Faculty of Information Technology in partial  
fulfillment of the requirements for the degree  
Master of Science (Information Technology)  
Universiti Utara Malaysia**

**by**

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## ABSTRAK

Organisasi hendaklah menilai keselamatan rangkaian meraka bagi mengenalpasti 'accountability', 'confidentiality', 'integrity', 'authority' dan juga 'authenticity'. Kaedah yang biasanya digunakan bagi tujuan ini adalah dengan menjalankan audit. Dengan menggunakan kaedah pengauditan, kajian ini cuba untuk menilai keselamatan rangkaian di Pusat Komputer UUM. Tujuan kertas kerja ini dibuat adalah untuk mengenalpasti ketidakcekapan di dalam pengurusan keselamatan rangkaian di Pusat Komputer UUM. Hasil keputusan dari pengauditan keselamatan rangkaian ini akan digunakan untuk mencadangkan penyelesaian bagi meningkatkan ketidakcekapan yang dialami. Kaedah pengauditan yang telah dipilih adalah daripada Information Protection and Security Division of University Computing Services (IP & SD UCS), dari The State University of New Jersey.

## **ABSTRACT**

An organization needs to evaluate its network security in order to measure the accountability, confidentiality, integrity, authority and also its authenticity. The method that is commonly used for this purpose is by conducting an audit. Using the auditing method, this research attempts to evaluate the network security at the UUM Computer Centre. The purpose of this paper is to identify the network security deficiencies at UUM Computer Centre. Results from the network security audit will then be used to recommend solution to improve those loopholes. The selected audit method is based on the Information Protection and Security Division of University Computing Services (IP & SD UCS), from The State University of New Jersey.

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Mohamad Fadli Bin Zolkipli  
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# CHAPTER 1

## INTRODUCTION

The change in computer network and telecommunication including Internet technology and wireless networking now has enable organization and people to communicate more quickly and extensively. It has made the business or management activities more effective, easier and faster. However, one of the criteria that can not be avoided is the security aspect in order to measure the trust of computer network and information.

Basically, proper and effective network security provides the following criteria:

- Accountability - proof that an intended transaction indeed took place.
- Confidentiality - protection of confidential information from an eavesdropper.
- Integrity - assurance that the information sent is the same as the information received.
- Authority - assurance that those who request data or information are authorized to do so.
- Authenticity - assurance that each party is who they say they are.

Security is a significant consideration in Local Area Network (LAN), especially in the organizational network that connected to the Internet for local or remote access. Cisco System (2001) defined Internet as a “term used to refer to the largest global internetwork, connecting hundreds of thousands of networks worldwide using the TCP/IP protocol stack”. The Internet is not owned or controlled by any single entity or organizations.

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