IMPROVING THE ALGORITHM TO DETECT INTERNET WORMS

MOHMMAD M. RASHEED

Universiti Utara Malaysia
2008

KOLEJ SASTERA DAN SAINS
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Universiti Utara Malaysia

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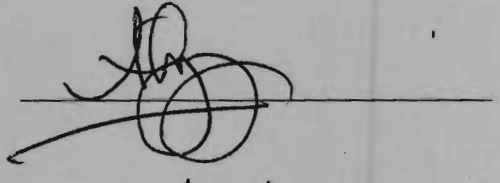
(Signature) : 

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IMPROVING THE ALGORITHM TO DETECT INTERNET WORMS

This thesis is presented to the Graduate School
In fulfillment of the requirements for
Master of Science (Information Technology)
Universiti Utara Malaysia

By

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Abstract

Worm detection and response systems must act quickly to identify and quarantine scanning worms, as when left unchecked such worms have been able to infect the majority of vulnerable hosts on the Internet in a matter of minutes [53]. Active worm spread in an automated fashion and can flood the internet in a very short time. The aim of this project is to improved algorithm to detect internet worm by two sub algorithm. The first is detecting the internet worm and the second is detecting stealth internet worm. A new equation created for depending on the average failure connection. The study based on the comparison and analysis of many worm detection and containment strategies. The principle of this effective algorithm is an improved two rotation process to detect and contain all types of internet worms.

ACKNOWLEDGMENT

IN THE NAME OF ALLAH

Most Beneficent and Most Merciful, Praise and thanks to Allah, first and last, lord and Cherisher of all the worlds who taught humankind everything they knew. May his blessings and His Mercy be upon the holy prophet Muhammad S.A.W the best of man kind.

I would like to extend my deepest love to my family especially my parents for their loving, support and trust.

Also, I would like to thank my supervisor Mr. Ali Yusny Daud for his guidance, critique and comments. I am deeply indebted to him for his kindness and patience throughout the supervision and preparation of this research project from the start until the final stage, is invaluable to me. Words cannot express my sincere appreciation to him.

I dedicate this thesis to my mother and father.

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LIST OF ABBREVIATION

DNS..... Domain Name System

FTP .....File Transfer Protocol

ICMP..... internet controller message protocol

IP .....Internet Protocol

IRC..... Internet Relay Chat

ITR..... Improved Two Rotation

RAM..... Random Access Memory

RATs .....Remote Access Trojans

ROM .....Read Only Memory

TCP .....Transmission Control Protocol

CHAPTER 1

INTRODUCTION

This chapter briefly explains the background of this study that mainly involves the detection internet worm. The majority of this chapter includes overview, problem statements, research questions, research objectives, scope of the study, and also significance of the research.

1.1 Overview

Currently, the internet is getting close to the persons' life. They login internet to chat with others, download files or browse WebPages. The internet is also playing an important role in the economy of country. Once the internet breaks down, it will cause an enormous economic loss. Worms is a serious security threat that may cause network congestion and internet break down.

Passive worms are different from viruses because they are completely autonomous entities. Virus is dependent upon a host file or boot sector, and the transfer of files between machines to spread, while worm can run completely independently and spread it self through network connections. An example of a worm is the famous internet worm of 1988: overnight the worm copied itself across the internet, infecting every Sun-3 and VAX system with so many copies of it self that the systems were unusable. Eventually several sites disconnected themselves from the internet to avoid reinfection [1].

A virus generally binds to executable code (both in system executables and scripts). An important part of a virus is its hiding technique, but for active worms this is not a priority since, in general, they do not piggy-back on other network protocols, meaning that worm propagation is clearly visible on the network medium. Although simple

The contents of the thesis is for internal user only

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