

Contents

Chapter	Page
Chapter 1- Introduction and Problem Definition	1
Chapter 2- Background	5
2.1 Overview of internet worm	5
2.2 Various signature generation Schemes	7
Chapter 3- Analysis of Different Type of Vulnerabilities	9
3.1 What is Vulnerability	9
3.2 Types of Vulnerability	9
3.3 Buffer Overflow Vulnerabilities	10
3.4 Stack Overflow Vulnerabilities	10
3.5 Heap Buffer Overflow	15
3.6 Integer Overflow	17
Chapter 4- The proposed System	19
4.1 The Vulnerability Signature Generator	21
4.2 The Signature Generation Process	22
4.3 The modules	23
4.4 Protocol Variable to Path Variable Mapping	26
Chapter 5- Protocol Variable to Path Variable Mapping	27
5.1 Protocol Variable to Path Variable Mapping Point	27
5.2 Protocol Variables and Path Variables	28
5.3 Our Approach	33
Chapter 6- Implementation	35
6.1 Windows	35
6.2 Linux	38
6.3 Sample Output	39
Chapter 7- Conclusion and Future Work	41
References	42