Universiti Teknologi MARA

Performance Test of Private Cloud Cloudstack

Mohd Izainezazmi Abd Azis

Thesis submitted in fulfillment of the requirement for Bachelor of Computer Science (Hons) Data Communication and Networking, Faculty of Computer and Mathematical Sciences

January 2014

ACKNOWLEDGEMENT

I would like to thank to my supervisor Pn Siti Arpah Ahmad for teaching and guiding me through producing this thesis. I also would like to thank to my thesis partner Pn Hajar Bakri for helping me with all information not forgetting to all my lecturers of Faculty of Mathematics and Science University Technology Mara, thank you for teaching me throughout the year of my studies. Last but not least, to my family many thank for all the courage and love.

ABSTRACT

At present, cloud computing technology and its services have been increasingly improved, but its application for small and medium (SME) in Malaysia is just the beginning. Therefore to many cloud management system creates a confuse for the cloud user to choose the software based on their business needed. This paper develops cloud architecture using open source platforms which is CloudStack. The performance and features of virtual machines (VMs) initiated and managed by CloudStack are test in terms of CPU utilization, I/O disk Speed,network performance using suitable benchmarks then analyze the result.

TABLE OF CONTENTS

CONTENT	PAGE
SUPERVISOR APPROVAL	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENT	vi
LIST OF FIGURE	viii
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	x

CHAPTER ONE: INTRODUCTION

1.1 Background of Study	1
1.2 Problem Statement	3
1.3 Objective	3
1.4 Project Scope	4
1.5 Research Significance	4

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction	5
2.2 Technology Used	5
2.3 Related Work	8

CHAPTER THREE: METHODOLOGY

3.1 Introdu	action	13
3.2 Project	t Methodology	13
3.3 Analys	sis Phases	
3.3.1	Hardware requirement	15
3.3.2	Software Requirement	15
3.4 Design	n Phases	
3.4.1	Context Diagram	17
3.4.2	Use Case Diagram	18
3.4.3	Network Diagram	19
3.4.4	Graphic User Interface	19
3.4.5	Development Phases	20
3.4.6	Testing Phases	22
3.5 Project	t Timeline	23

CHAPTER FOUR : RESULT AND ANALYSIS

4.1 Introduction	24
4.2 Comparison with Tradisional IT Infrastucture	24
4.3 Cpu Performance	25
4.4 Network Performance	27
4.5 VM Launch Time	28
4.6 Web Application Over Cloud Computing	30

CHAPTER FIVE : CONCLUSION AND RECOMMENDATION	
REFERENCE	32