UNIVERSITI TEKNOLOGI MARA

RESOURCE ALLOCATION TEHCNIQUE FOR GREENER CLOUD

AIMAN HILMI BIN ABDUL AZID

MSC. TELECOMMUNICATION AND INFORMATION ENGINEERING

FACULTY OF ELECTRICAL ENGINEERING

JANUARY 2017

ACKNOWLEDGEMENT

"In the name of Allah, the most Beneficent, the Most Merciful"

First of all I would like to express my utmost gratitude to Allah S.W.T, The-Almighty for giving me an opportunity to successful complete this final year project report. I would like to say thanks to my final year project supervisor, Assoc. Prof. Ruhani Ab. Rahman for her continuous support, guidance and encouraged which have helped in keeping this research work on track. Without her, I would not be able to proceed in doing this project. Also a big thank you to my Final Year Project coordinator for her support and guidance on making my progress on doing this project. Lastly, I would like to say a million of thanks to my family for their support and their prayers in completion of this Final Year Project.

ABSTRACT

Cloud computing infrastructure are designed to support the accessibility and deployment of various service oriented applications by users. Cloud computing services are made available through the server firms or data centers. The complexity of the resource allocation increases with the size of the cloud infrastructure. This research present the performance of cloud in centralized and distributed cloud with using CloudSim. Result from both models tested were compared and analyzed.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The modeling of cloud performance can be implemented using several simulations such as Cloudsim, GreenCloud, GDCSim and MDCM simulation. In this research, the modeling of cloud architectures have been implemented using CloudSim to measure their performances.

CloudSim defines by the instances of different classes as the parameter of the cloud environments such as hosts, VMs, applications and datacenter [2]. Datacenter is resource provider which simulate the infrastructure as service [2]. For CloudSim start the simulation it need at least one datacenters [2]. For the application scheduling and coordinating the resource, Datacenter Broker will be responsible [2].

CloudSim analyst tool is an application that will be used for modelling and analyst the architecture for centralized cloud and distributed cloud.

Cloud analyst tool is used by developers or designers to determine the best strategy for allocation of resources among available data centers and cost related to such operations [4].