

UNIVERSITI TEKNOLOGI MARA

**HIGH AVAILABILITY WEB SERVER
(CLUSTERING)**

MUHAMMAD AKHTAR BIN MD YUSOFF

**Thesis submitted in fulfillment of the requirements for Bachelor of Science
(Hones) (Data Communication And Networking) Faculty Of Computer And
Mathematical Sciences**

JUNE 2015

ACKNOWLEDGEMENTS

Firstly of all, I give thanks to Almighty Allah, for giving me continue to breathe and to carry out a normal life.

Along the way I finish this project, I would like to thank everyone involved in making my proposal at this time. I especially want to thank my supervisor Dr. Nor Shahniza Bt Kamal Bashah guidance, interventions and inspire my project.

These efforts and patience all this while makes me stronger to complete this project for me to finish my studies in (UiTM). Thanks lot to my wife Nur Suhana Bt Sudin has lot of encouragement and inspiration to me over the years.

May Allah gives continuous rewards to all of you. Amin

ABSTRACT

Cluster is very good in management database system. This is because it can make reduce downtime and make system database more effusions. In performance database is automatically and transparently partitioned across low cost commodity nodes, allowing scale-out of read and write queries, without requiring changes to the application. Mysql function multi-master replication its means each data node can accept write operation. Coupled with auto sharing, this gives very high write scalability. For the real time responsiveness, low latency with in memory table and indexes, asynchronous check pointing to disk and binding of treads to CPUs. Implementation Mysql cluster schemes can improve system performance better than using a single database. Implementation Mysql cluster with schemes can provide availability system is maintained and scalability enough to be able to continue to serve each request of the user. This document contains information of the requirement analysis, design, implementation, testing of the container booking and management system. The project finished and web server release successfully, planning for Reliability and High Availability from down time.

TABLE OF CONTENTS

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

CHAPTER 1: INTRODUCTION

1.1 Introduction	1
1.2 Problem Statement	3
1.3 Project Aim and Objective	4
1.4 Scope And Assumption	4
1.5 Significance Of Study	5
1.6 Summary	5

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction	7
2.2 History- Review of existing System	7
2.3 Advances In High Availability Web Server Technology	9
2.3.1 WEB Server	10
2.3.2 Operating System (Centos 6.5)	10
2.3.3 Type Of Operating System	11

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This is a system which can provide full facilities to the website hosting provider and large business organizations.

High Availability Cluster with Load Balancing is such a system, which can provide continuous service though any system components fail uncertainly. Without clustering, a server running a particular application as when that particular server crashes, the application will be unavailable until the crashed server is fixed. This system is very much efficient, because the full system is automated from the very beginning to the end. High availability is essential for any organizations interested in protecting their business against the risk of a system outage, loss of transactional data, incomplete data, or message processing errors. Servers don't run forever. Hardware components can fail. Software can crash. Systems are shutdown for upgrades and maintenance. Whatever the reason, when a server goes down, the applications and the business processes that depend on those applications stop. For a business interested in being available at all times, HA clustering is a practical solution. High availability clusters allow the application and business process to resume operations quickly despite the failure of a server and ensure business is not interrupted. High availability clusters are simple in principle. Two or more servers are joined or clustered together to back each other up. If the primary server goes down, the clustering system restarts the application on one of the other servers in the cluster, allowing the business to continue operating normally. The servers are connected using a network or serial interface so they can communicate with each other. With this kind of clustering there is no need