

CHAPTER I

INTRODUCTION

1.1. Background

Web servers are servicing to provide companies information system for its customers through internet. When a web server is down the companies would get loss and customers would be disappointed. Then, many companies or organizations are competing to provide the fast service in for accessing data and transactions online. This is because many consumers need to access data and transactions for anytime. The image of companies or an organizations would be better if they can provide data service anytime and they can guarantee the security data from consumers.

This project is to avoid server failure and loss data on server. Load balancing and failover method are solution to avoid the server failure because busy traffic and data loss because damage from server hardware. Load Balancing method give a solution how the server is able to handle many requests. Failover method is the integration between a master server and multiple backup servers that work for make data form customers safely back up on the backup server.

1.2. Scope

The scope in server cluster architecture are as follows:

- The server cluster architecture using the Linux environment and Open Source.
- Operating System which is used to build a whole server is CentOS.
- Nginx as Network Load Balancer software

- There is two Apache Web Server and MySQL Database Server on Server Clustering and work redundant interconnections.
- All MySQL Database Server replicating one another, using methods master to master replication.
- Failover and Failback on all of Database Server using Heartbeat software.

1.3. Objective

The purpose of server cluster architecture in this final project are:

- Knowing the advantages and disadvantages of the server that use a combination from Load Balancing method and Failover method, and to know how the of both methods workings.
- Implement a reliable server cluster architecture to the risk of server failure and corrupted data. So it becomes the increase in the Quality of Service on a server.
- Analyze and measure how the server that use a combination from Load Balancing method and Failover method with the conventional method.