UNIVERSITI TEKNOLOGI MARA

COMPARATIVE HIGH AVAILABILITY LOAD BALANCING

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JANUARY 2015

ACKNOWLEDGEMENTS

Alhamdulillah. All praises and gratitude to Allah because of His Almighty and utmost blessing, I was able to complete this research within the given duration of time.

First and foremost, I would love to direct my special thanks to my supervisor Dr. Nor Shahniza Kamal Bashah, who has given me the idea and concept for this project.

Special appreciation also goes to my beloved parents who understand me and give all the time that I need so that I would be able to complete my final year project and subsequently, fulfill the Degree's requirement.

Last but not least, I would like to express my gratitude to my dearest friend, lecturers and fellow classmates who have contributed their help during my study in UiTM.

ABSTRACT

Nowadays, web servers are commonly used in multiple large companies. A good server should come with the high-end technological concept in order to maintain the workload and also support the constant application of the particular server. The server must be able to be used in multiple heavy workloads and reliable. In other word, it ensures full optimization, in which the web server will be based to another server that has been connected with other machine. There will be multiple issues with the web server, database server and firewall. The main concern for web server sessions is that they have limited connectivity base scaling, latency, bandwidth and disconnected operation. This issue will be referred as part of the purposes in doing this research project and become proof for the high availability load balancing concept. The problem of load balancing is usually caused by many factors. High availability load balancing should be used in web server base. The purpose of this project will focus more on analyzing the webserver performance and how to resolve a high load bandwidth in the web base by do comparative load balancer method. Nginx will provide high performance and small memory footprint in the web server, as it improving the low performance, less effective and fewer throughputs, the actual objectives of the research are highlighted. The first objective will be to analyze the current performance of web server by do the comparative study of load balancer method, The second one is to resolve the issue of high load bandwidth by using 3 type of method and do the comparative for which method is better for be use. The methodology for this project is RAD methodology, from the result and finding is show each type of load balancer method there have their own special for some purpose be use at, its depend on the environment that require the load balancer. This project the idea is to assist any web server by using load balancer by reducing the conjunction of data bandwidth and overload data transfer.

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CHAPTER ONE

INTRODUCTION

1.0   Introduction

The new millennium era nowadays are using web as a platform for any use, such as a social media to interact and communicate with others by web base through the network and devices like Smartphone, Computer, Laptop or IPad and Tab. By using these aforementioned devices, it can make our lives to be more in order and simplify our daily routine. Any web server without load balancing is rather risky to be published, since we will not aware of the risk that the server may impose towards the public users. After all, load balancing is actually a tool that helps the web server to increase its productivity level of usage as well as its availability in market. In short, the load balancing function will enable the server to perform at the maximum level. Web server, on the other hand, is an application installed in computer with the combination to another computer that has been setup with an apache service and any other services suitable for the server to operate the web. The web, like internet or intranet for the server should be accessible by clients who wish to view the server. The web server also will provide FTP, HTTP, SMTP and HTTPS for the specific use by the user.

The situation is that when this web server evolves and continues to expand, there will be more transfer rate of data packet in the network. Increase in data packet transfer may lead to traffic collision of data. However, the effect of such collision may be minimized if the server used is equipped with load balancing function. The load balancing technology is basically an application installed at delivery controller operation, in order to maximize the form of network worldwide and to