CHAPTER VI

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The study focus the means for increasing of service performance for HTTP. Chulalongkorn University campus network is selected as a case study. Because the World Wide Web application is used increasingly on Internet therefore the study of involving factors that are response time, cache size, and hit rate, is important indeed. It can summarize about factors that increase the service performance of HTTP, as follows;

6.1.1 Network model

The study of experiment is on three alternative network models in order to increase the service performance of HTTP is summarized as follow;

1. Direct Access Model. Access point on PC is connected directly to Internet network and can be called a basic network. It can handle the World Wide Web usage in level of small or section area. As the number of usage is increased, the service performance is getting worse because the bandwidth resource is limited as shown in Figure 4.1 and Table 4.2.

2. Single Level Model. Access point PC is connected through one Proxy server and then pass through Internet network. It does not connect directly to Internet, but send data to Proxy server. It can support World Wide Web usage, better than a Direct Access Model that experimented in Chapter IV. Technically, Proxy server can transfer data, store and forward closely to Local Area network (LAN). It can reduce the response time of retrieving data from Internet.

3. Hierarchy Level Model. Access point PC is connected through more than one Proxy server deployment and then pass to Internet network. It does not connect directly to Internet, but pass to Proxy server that is called hierarchy. It can design Proxy server more than one server depending on the number of users and transaction within organization.

It is the best network model of this experiment described in chapter IV. Those Proxy servers are better handle data transfer between Local Area network (LAN) and Internet. The first Proxy server deploys in departmental network, sharing data with the second Proxy server that is implemented in

central network. Web documents from Internet are reduced the response time by two levels of Proxy server.

Although Hierarchy model is the best network model for campus network. But there are limitations of this experiment for three network models.

Because it is tested on the real situation so it could not control other factors like behavior of users, time to navigate WWW. From this experiment, the organization can deploy a proxy server at a network bottlenect. Bottlenects are often created by slow connections at network, poor performance. Manging bandwidth at these locations is imperative as the business grows and network traffic continues to increase the service performance.

6.1.2 Cache size and hit rate

Proxy Server can proactively download content from a specified Web sites or perform scheduled up-to-date checks on documents already in the cache using Cache.

Hit rate in this experiment is focused on the number of byte transfer, and considered as a significant indicator of performance measurement. The experiments have been conduct to the suitable cache size with the maximum hit rate. The cache size is coming to the stable state in this period it is appropriated cache size as shows in Figure 5.3.

This experiment shows that there is inconsistency point run out of expectation. Because it could not control the number of user in each day. If the utilization is changed whether decreasing usage or increasing usage, the suitable cache size and hit rate will be changed as well.

6.2 Recommendation

In this study, one technique to increase the performance in response time of World Wide Web is investigated. It is very popular to design Proxy server deployment in any environment. Proxy server provides administrators with a tremendous amount of control to ensure efficient caching. This makes Proxy server useful for reducing network traffic and user response times in a wide variety of network configurations.

In general, the utilization of Internet is increasing continuously that Internet is used in any environment such as organization, company and university. There are several factors that cause Internet usage. The response time of users is problem for Internet usage and effect to particularly interrupt in a congestion time, data error, and long wait time.

This study is one propose to increase the performance in response time of HTTP. Other campus network can use proxy routing. It is possible to create multi networks of Proxy server to enhance performance and reduce congestion across internal networks. Proxy Server can be deployed at any network bottleneck to provide the benefits of caching as the organization grows.