UNIVERSITI TEKNOLOGI MARA

THE DEVELOPMENT OF NETWORK ERROR MESSAGE ALERT RETRIEVAL FOR ORGANIZATIONAL INTELLIGENCE SYSTEM BASED ON INFORMATION RETRIEVAL TECHNIQUES

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ABSTRACT

The error message from the NMS is only known by the network engineer to take action. But, for the top management they doesn't know the contents of the error message and what the important key word for them to understand the network problem exactly. The top management only wants to know the frequent problem occur in each location. From that information they can know what is the most problem occur in the network by each date or entire month for the future planning. In order to overcome this problem, this dissertation will develop an algorithm for the top management to retrieve the important information using information retrieval techniques and method. The experiment will be conducted based on the performance metrics which is accuracy and processing time. The result shows that, this algorithm archive 100% for the accuracy even though the input size is big. For the processing time, the result shows that if the input sizes become larger, the processing time also take effect and increasing in processing time.

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CHAPTER 1

INTRODUCTION

1.1   RESEARCH BACKGROUND

This dissertation is based from the current problem at Business Information Technology (M) Sdn. Bhd. This organization is providing ICT solution and services which is:

- Managed services
- Software services
- Integration services

Networks have gone through a rapid evolution recently. Existing network such as CDMA, GSM, WCDMA and many more are extending its limitation and technology. Network design and performance differences are two top challenges in evolving the quality of the network. Implementing real time network monitoring is important. It helps in optimizing the network quality and performance. It also helps to improve fault and error in signal analysis. Network Monitoring System (NMS) can be divided into three main criteria. First, spIserver which function as controller and it preserve different of configuration and data collection from analyzed network. Second is spIstation which show the system configuration and interface. Third, the spIprobe that is used for monitor any changes in message signal that pass through the entire network (He, Huang, & Li, 2011).

It is a huge helps for NMS to detect any error at a location. Network monitoring should be conducted at several different layers and multiple domains to be details in analyzing overall network performance and to ease troubleshooting errors that being discovered (Kuwabara, Shimizu, & Maruyama, 2012). Analysis paper from (Jintagosonwit, 2012) suggested IEC61850 standard that offers great benefits in real time communications for high priority messages. It improves cost and electric supply. However, it has error that caused network monitoring system to send false error. It cannot