ABSTRACT

The existence of a Call Centre on each phone provider is required. This is about customer satisfaction against a product provider. Call Centre functionalized so that a customer's own telephone provider can talk directly with Agent (customer service) from the telephone operator. It required a good performance from a Agent on Call Centre.

In this final project, creating a system Call Centre use Asterisk based programming Java. Where use of a Java program to monitor the performance of Agent. From the results of monitoring and then do the grouping obtained using two methods of manual calculations and Single Linkage method. Grouping manual done based on predefined standards, while using the Single Linkage clustering refers to the distance between the nearest Agent parameters.

From the test results obtained that the Call Centre system to determine the performance of Asterisk for Java-based agent has been running well. Longest execution time required to store the monitoring data is the parameter Log Time with an average time of 2.2 milliseconds. As for the manual clustering program execution time, the more the number of Agents in the execution time of the longer program, which when tested against 10 Agent takes 352.8 milliseconds. When the grouping process using manual methods and Single Linkage method, there are differences in the number of Agents in a cluster, the members in each cluster, and the execution time to perform the cluster. In terms of execution time, Single Linkage method is superior with a time of 184.7 ms 352.8 ms compared to manual methods in classifying 10 Agent. By seeking the variance, obtained that the clusters formed from the manual method is more ideal than the Single Linkage method. Where the value of the variance of the manual method that is smaller than the value 1.4172645672185147 variance Single Linkage method is 1.4568698006373213.

Key words: Call Centre, Java, Agent, Database, Monitoring, performance Agent, Single Linkage.