**Abstract**

The classification and identification of network application from network traffic flow provides various advantages to a number of fields such as security monitoring, intrusion detection and to tackle a number of network security problems including lawful interception. In this paper traffic flow is described by using the discretized statistical features. The flow correlation information of the network traffic flow is modeled by Flow Container (FC). In this paper novel hybrid aggregated classifier is proposed. First, low density flow and high density flow is analyzed. For Low density flow C4.5 classifier is used and high density flow Naïve Bayesian classifier is used and finally aggregated result is provided. The aggregated result is compared with machine learning algorithm such as Single Naïve Bayesian predictor. The proposed system enhances the accuracy rate as well as improves the performance of the system.