Internet Traffic Classification for Faster and Secured Network Service

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Abstract

Due to the growth in prominence of Web, there is a need for proficient system administration. Network visibility becomes very crucial for traffic engineering and network management. A large number of users demands varied information at a given time. By identifying the users that demand same type of information and clustering them into different groups, the Internet accessibility and resource utilization can be improved. The most popular solutions for network management are Deep Packet Inspection algorithm, In-Depth Packet Inspection algorithm and some related statistical classification technologies. All these solutions depend on the availability of a training set. Supervised (classification) and unsupervised (clustering) algorithms are used for identification of the network traffic. Network traffic analysis always depends on various parameters such as the data to be searched, the time of searching, available bandwidth, number of accessing users, architecture of the network system, etc. For simplicity, the type of data and the data rate was considered for this implementation. Due to clustering, automatic identification of the classes of traffic was achieved. Since clustering technique is used for group processing of information, group signature techniques is being applied here for secured data
processing.

References


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Index Terms

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Keywords

Traffic classification, SeLeCT using self-seeding, GFGS Algorithm, SHA-256.