International conference on

Artificial Intelligence, Robotics & IoT

August 21-22, 2018 Paris, France

Classification of VoIP packets and network anomaly detection using fuzzy logic

The Voice over Internet Protocol (VoIP) technology has proven to be revolutionary and cheap because it does not need new infrastructure as it has an underlying available global IP infrastructure. However the transition from PSTN to VoIP has not yet been so poignant because of the compromised Quality of Service (QoS) such as delay, packet drop and packet loss that cause unstable voice packet delivery, packet jitter, packet loss and echo. Priority queuing algorithm offers an easy escape to reduce delays, however it can result into repetition and next queue remaining starved. To solve these problems we have tried to mount a fuzzy logic based inference system to classify the queuing-incoming packets (voice, video and text). Network management is becoming increasingly essential with the acute rise in the number of applications that use computer networks and the advent of ubiquitous internet access. Thus availability, integrity and competency of computer networks become a priority today and a crucial resource to be managed. To assess the effectiveness of these networks, the traffic parameters need to be analyzed. This paper attempts to apply a fuzzy logic scheme based on descriptors like energy, centrality, concentration etc., to recognize whether an instance represents an anomaly or not. Indeed the paper proposes an intelligent system with the capability to monitor the network's traffic (specifically VoIP) flow. The proposed anomaly detection system exposes network problems autonomously issuing alarms when a possible problem is present.

Hansal T Shah
Pandit Deendayal Petroleum University,
India

Biography

Hansal T Shah is a Computer Science and Engineering student who has completed his 2nd year from Pandit Deendayal Petroleum University. Multidisciplinary research topics interest him. He is a cisco certified network associate (CCNA) and a cisco certified network professional (CCNP) in routing and switching. He is a fellowship holder of the premier research scholarship of India—the KVPY Fellowship. He has presented more than 3 papers in reputed conferences at national level and has been helpful to multiple fellow students for their research interests. He is also a Co-founder of an IT based start-up that is under incubation under central government funding scheme.

shahhansal01@gmail.com

Notes: