# Abstract

*A multi-agent system can work on different tasks in a distributed environment to achieve single global goal. These systems can be integrated with Cloud computing to get better performance. A multi-agent system can perform more efficiently by utilizing cloud storage resources and computing power. Till now, a lot of research work has been done on traffic signal automation by using multi-agent systems. This research presents a new architecture by utilizing the power of multi-agent system and cloud computing to handle the exigency services in the urban transportation system. Exigency services are the special cases in the transportation system which may include an emergency ambulance movement, police movement, Fire Brigade, and other exigent situations. In the proposed architecture agents are deployed at each signal node which collect information at each signal and transmit it to the cloud services. These agents are also able to handle the signal nodes in case of emergency. Agents at different nodes share information about exigency. Cloud service plays the backbone role with multi-agent while handling exigency. It analyses the input data and determines the presence of an emergency service. We have defined a priority mechanism to handle multiple emergency services at a particular crossroad or chowk. We also have presented different case studies to show the utility of the proposed architecture. It gives a better understanding of exigency service handling in an automated urban transportation system.*