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## (54) Title of the invention : SYSTEM AND METHOD FOR DETECTING INCOMING MALICIOUS TRAFFIC USING BLACKLIST IP

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## (57) Abstract:

The present invention discloses a system (100) and a method (200) for detecting malicious network traffic. The system includes a processor (102) configured to monitor network traffic in real-time within a predefined area where multiple computing devices are connected to a network (108). Each packet of network traffic is analyzed to determine its legitimacy or maliciousness, and suspicious activities are identified using a combination of machine learning algorithms and a rule-based system. Further, preventive measures, such as blocking IP addresses, terminating network connections, and activating firewall rules, are initiated to prevent the success of detected attacks. Additionally, notifications are transmitted to administrators or associated computing devices, alerting them about the detected suspicious activities. The system may further include a network packet capture module for capturing network packets and associated metadata, and the processor further record details of detected suspicious activities and the corresponding preventive measures.

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