An Automated Systematic Approach For Debugging In The Networks

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Abstract: Technology is improving day-by-day massively which withholds merits and demerits in several roles. In network plays a vital role because without a reliable network nothing is possible technically. However the network is improving the administrator had to rely on simple tools for consistent services, on this ping and trace route are used for debugging the problems. As to provide a prominent solution for these problems we proposed an "Automatic Test Packet Generation" (ATPG) for testing and sort out errors in those networks in an efficient manner. Our proposed method examines the router configuration based on that it implements a device independent model. It works on the concept of minimal or maximum mechanism such as by neither computing test packet on every network link nor computing every rule in the network. In this the generated test packets are sent sequentially and processed. Based on the result faults are detected and to cure those faults a separate mechanism is applied. ATPG has the ability in finding rules of incorrect firewall as well as performance problems like congested queue. ATPG is far better than the existing work such they implies static checking which cant able to detect the liveliness or its performance. We apply our proposed work in a real-time data set and analyze how the test packet satisfies the rules in the network. The result proves it efficiency and provides a prominent solution for the drawbacks in the existing works. To be more consistent the ATPG data and codes are available publically.