

Verification Framework for Software-Defined Networking

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Abstract— Software-defined Network (SDN) is a 5G's core technology. This provides many advantages over traditional networking by separating the controller and data planes. However, the network topology changes depend on the network configuration frequency. Therefore, it requires applying consistent network rules and providing network resilience. In this paper, provide a verification framework based on the model checking, and to ensure resilience, verify both a topology and modified topology with formal verification.

Keywords— SDN, formal verification, model checking, UPPAAL, TCTL



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