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(57) Abstract :
The present invention discloses a system (100) and method (200) for forwarding table checking for network routers using packet tracing and verification techniques. The system combines hardware components for intercepting packets at strategic points in the network with software components for in-depth analysis to verify correct forwarding based on forwarding tables of routers. The real-time packet tracing and verification ensure enhanced network reliability by reducing data loss and misrouting instances. Automatic error detection and report generation streamline troubleshooting, allowing network administrators to promptly address issues. The system's adaptability, abnormal behavior detection, and protocol analysis features contribute to improved network security and performance.

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