

# **MPLS Network Topology Design Using Genetic Algorithms**

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## **Summary**

This paper addresses the application of genetic algorithms (GA) to the optimal topology design of MPLS networks. This problem is a highly constrained optimization problem for which exact solution approaches do not scale well. We first use a layered model and decompose the MPLS topology design as a set of linear programs. Then, we propose a heuristic approach based on genetic algorithms for solving them. Simulation results show that the proposed approach is effective and give optimal or close to optimal solutions for the tested cases.

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