

An Evolutionary Algorithm For Network Topology Design

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Summary

The topology design of campus networks is a hard constrained combinatorial optimization problem, dictated by physical and technological constraints and must optimize several objectives. Furthermore, due to the non-deterministic nature of network traffic and other design parameters, the objective criteria are imprecise. Fuzzy logic provides a suitable mathematical framework in such a situation. We present an approach based on a simulated evolution algorithm for design of a campus network topology. Three variations of the algorithm are presented and compared. Results show that the third variation, namely, simulated evolution with tabu search characteristics gives the best result

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