Abstract

Network Applications can be broadly classified as Throughput sensitive or Delay sensitive. Such applications require efficient routing mechanisms in order to work effectively. Genetic Algorithms can be used for defining the Best or Optimal Route based on its sensitivity and Various Constraints that the application imposes usually referred to as Constraint Satisfaction Problems (CSP). The use of Genetic Algorithms for selecting an optimal route based on CSP requires a mechanism for automatic discovery of network topology and also mechanisms for learning the capacity of the network infrastructure. SNMP along with MIB provides the required data for Topology discovery and also to learn the information about the current network capacity along with various bottlenecks present in the topology. Since the shortest path is not always the best path, our genetic algorithm will provide the optimal route based on CSP and application sensitivity.

References
Optimizing Routes using Genetic Algorithms based on Throughput or Delay Sensitivity of Applications using SNMP for Automatic Discovery of Network Topology

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Index Terms

Computer Science

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Keywords

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