Abstract

Client/Server based network management models involve the transmission of large amount of management data towards the centralized management station for processing. The staleness of gathered data (due to network latency involved) and probable error in the selection of management task being carried over (owing to the staleness of data) reduces the reliability of such management applications. In this sense, use of mobile agents offer many possibilities for designing the next generation of distributed network management systems. This paper discusses various mobile agent based network management models, the key advantages of mobile agents in the distributed network management systems and presents a mathematical model for the purpose of comparing client/server vs. mobile agent paradigms in terms of responsiveness and traffic generated around management station. Further, the existing mobile agent based systems follow arbitrary itinerary wherein it is susceptible to travel on the links which might incur high bandwidth utilization & greater roundtrip time. In this work a minimum spanning tree is constructed for the network represented as undirected graph. The itinerary obtained thereof is followed by the MA agents resulting in reduced bandwidth utilization and shorter roundtrip time.
An Analysis of Management Cost for Mobile Agent based Network Management Model

References

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An Analysis of Management Cost for Mobile Agent based Network Management Model


Index Terms

Computer Science   Networks

Keywords

Mobile Agents  Network Management  Distributed  Snmp  Scalability