

INTELLIGENT NETWORK MONITORING USING MOBILE AGENTS

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Abstract

Currently, most network management systems operate on SNMP. This protocol use the management station that provides a user interface to the network manager and interacts with agents that manage remote access to the Management Information base. In certain circumstances (e.g. at times of network stress), this interaction generates significant traffic that overloads the management station. A distributed paradigm is a revised way to perform management functions when networks grow significantly. In this sense, use of mobile agents is an option to distribute the network management. These agents move to the place where data are stored and select information which the user wants. They decentralize processing and control and as a consequence, reduce the traffic around the management station and distribute processing load. The main purpose of this work is to use mobile agents paradigm to implement the network monitoring (Instead of using the conventional client-server approach) to alleviate load created by network management protocols and to investigate the performance of network. This paper proposes a security model for communicating through Mobile agents.

This paper proposes to implement the network performance monitoring using mobile agents. Some principle parameters that are to be monitored are: source ip, destination ip, no of packets, startup time, down time and bandwidth utilization of the network component. These parameters provide useful information to model the traffic through the network for further enhancements. The model is very robust when compared with SNMP. The model performance is tested for security using ForEx agents.

Keywords: SNMP, Mobile Agent, MIB, Static Agent, Status Agent, NWManager, Test Agent.