Abstract

Mobile agents are becoming pre-eminent by not only outperforming in comparison with the conventional techniques such as RMI, RPC etc. but also by surpassing their loopholes. They promise to solve many major issues of high network bandwidth consumption during communication, bottleneck problem of centralized system, even can act as intrusion detection agents, and may also be used as monitoring of various nodes in multifarious domains like e-commerce services, for load balancing in cluster, health care monitoring systems, air traffic control systems, and many more. In this paper, the agent server required to allow mobile agents on any machine in network are compared for homogenous and heterogeneous nodes. The homogeneity and heterogeneity of nodes is defined at the hardware level and type of OS installation. Basically, a mobile agent is moving the code to data rather data to code. Agent and agent server are two different parts, in which agent is a computational, operational and communicative entity while the agent server takes care of fundamentals execution and security features. To all intents and purposes, these agent servers help mobile agents to interact and engage with the underlying system acting as an execution environment for them. Agent servers,
also called as agency or agent runtime environment, may differ for different platforms and this
contrast lies in the software architectural components which they contribute being a middle layer
in between the mobile agents and system platform. This paper focuses on architectural
dissimilitude between agencies of heterogeneous and homogeneous distributed systems.

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**Index Terms**

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**Keywords**

component; mobile agents; software architecture; distributed systems; agent migration; marshling; agent transfer protocol