

Development of A Decision Framework for Client/Server Architecture

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Abstract

It is difficult to design a client/server environment that provides various network services and meets the requirements of an enterprise. Significant knowledge and experience are needed from early stage of database and logical network design. Such knowledge and experience to help make design decisions are scarce and hard to acquire. Therefore, it is important to perform benchmark tests for variety of hardware and software resources such as NOS, DB Server, middleware, development tools and other third-party tools which inundate in client/server markets, and to choose the optimum platform that is coincident with the management strategies and enterprise environments.

In this paper, a decision framework is proposed, which enables us to perform an objective benchmark test with regard to the system resources and select the configuration corresponding to the most suitable distribution topology. The framework consists of the following steps: identifying enterprise strategies and target business activities, determining the appropriate distribution topology in accordance with the main system requirements in *management, performance, operation, development* aspects and their sub-criteria, and finally, comparison and benchmarking of the system components. Based on the proposed framework and accompanying methodology, we have developed an expert system for the configuration of a client/server architecture.