Title	
Author(s)	,
Citation	
Issue Date	2003-03
Type	Thesis or Dissertation
Text version	author
URL	http://hdl.handle.net/10119/1693
Rights	
Description	Supervisor: , ,

Japan Advanced Institute of Science and Technology

The Research of Central Management of User Information on Environment of Mixed Naming Service

Yukinori Sakashita (110048)

School of Information Science,
Japan Advanced Institute of Science and Technology

February 14, 2003

The Central management of user information reduces management cost and administrator's burden in environment of various systems. However, NIS and Domain Controller, which are generally used now, are two-layer structure naming services which consists of client and server. In two-layer structure, central management of user information is difficult, because naming services architecture, which is the form user information store and the network protocol, differ from system to system. An address book in the personal department used user information besides the naming service used on a computer. But these systems is managed in other database become independence and no central managing It is the situation which conventional naming services is original management of information, become information is hard to use from other systems. Therefore, this problem reduces the management of the whole system and increases management costs.

In this paper, the new approach is central management of user information using three-layer structure naming service. I examine the validity using evaluation system. The new approach is the additional server, which change information, between client and server of conventional naming services. And this system provide users with availably and performance as

usual, and administrators with high management nature and low management cost The three-layer structure naming service is built out of Client Layer, Naming Server Layer and Database Layer. Client Layer is using clients of two-layer structure naming service because installing special software to clients worsens migration and management nature Naming Server Layer lose the difference in the architecture of clients and the format change mechanism and the cache, which adds to Naming Server Layer, increase management nature and performance. The database of Database Layer which does not store the information depending on specific naming service and can store flexibly and has the high scalability is desirable. By these reasons, Database Layer is the directory server.

I experiment with the evaluation system which is based on this proposal system. The rate of a hit on the cache mechanism and the response ability experiments with this system. In the evaluation experiment about the response ability, I measure response speed because of prediction about a fall of the performance when naming service change to this system. The main causes of a fall of response ability are because the number of times of network access. In the evaluation experiment about the rate of a hit on the cache mechanism, I investigate the validity of the cache mechanism using packet data of naming services currently executed Consequently, the rate of a hit on user information becomes high rather than the environment of no central management system. Hostname information becomes a high rate of a hit by using the same hostname of File Server from all clients.

Based on that experiment, we argue about the management nature of the proposal system, the performance, and the application About the management nature, it indicates about an advantage and a problem and compares with any other research. By the argument on the performance, it indicates to be construction of a cache mechanism and divide method of the database by informational use frequency. The application argues about unification of the information on the naming service and the personnel database and compares with Meta-Directory.

This research estimates the naming service used in one organization. But naming services where two or more organizations are straddled, such as user information on the Internet, are expected. A future subject is evaluation in naming services where two or more organizations are straddled.