

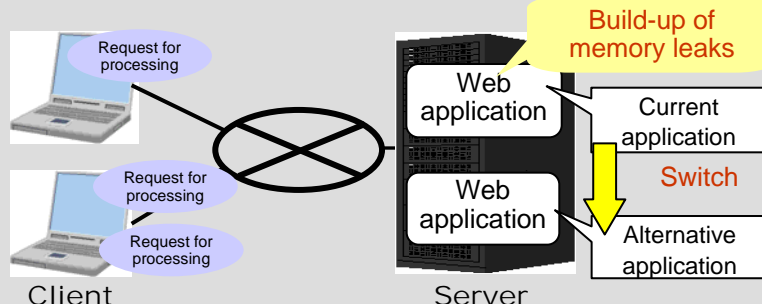
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Development of a software management method to prevent system failure during Web application use - Resolving issue of insufficient processing memory without interrupting service -

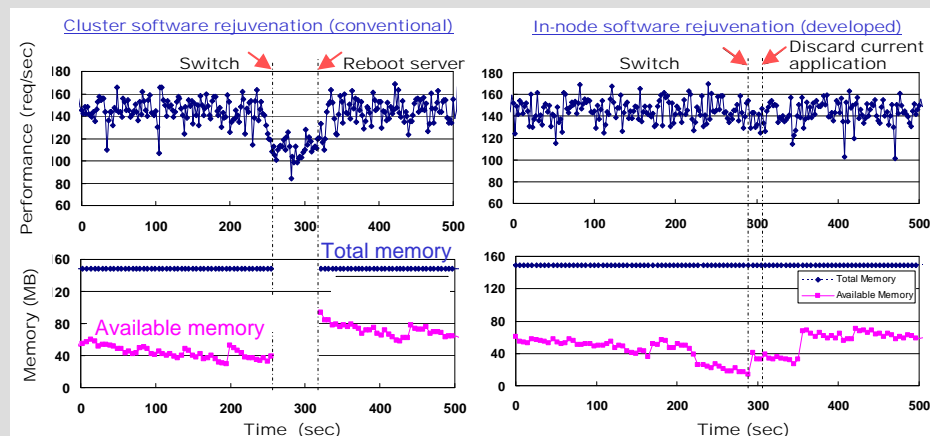
In-node software rejuvenation

Switching between current web application and alternative web application conducted within a single server without interrupting the running service

➡ Preventing both system failure and performance degradation



Performance and memory comparison on switching applications



The Central Research Laboratory of Hitachi, Ltd., has developed a software management method, “*in-node software rejuvenation*,” to prevent system failure such as system crash, due to Web application memory leaks. This method switches between current and alternative Web applications while a service is running, to free memory leaks and prevent system failure. Using this method, even if memory leaks exist, processing power is almost unaffected, and the service can continue running without system failure. This method is expected to contribute to technology for a 24-hour, 365-day operation of Web applications.

Results of this research were presented at the 7th USENIX Symposium on Operating Systems Design and Implementation (OSDI '06), held in Seattle, W.A., U.S.A., from 6th to 8th November 2006.