Software Rejuvenation in Web Services

Abstract

In this paper, we describe the formatting guidelines for IJCA Journal Submission. Software Aging is a phenomenon in which the state of a software system degrades with time and eventually results in software failures. The main causes of software aging are depletion of system resources, data corruption, numerical error accumulation etc. which may eventually lead to crashing/hanging. "Software Rejuvenation" is a technique intended to reduce such unplanned outages due to aging. The basic idea is to pause or halt the running of the software, refresh its internal state, and then resume or restart it. Web services also suffer from software aging related problems and needs rejuvenation. In this paper, we discuss the use of a tool in measuring the software aging in .NET based web services and discuss how to apply rejuvenation techniques to counter software aging. The methodology is illustrated by application on .NET based web services.

References

Index Terms

Computer Science

Software Engineering
Keywords

Software aging  Software Rejuvenation  Memory Leak  Garbage Collection  Fragmentation  CLR Profiler  Web services