

Poster Session (P)

Poster Lunch (1)

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AN ARCHITECTURE DESCRIPTION LANGUAGE FOR ON-ORBIT SPACECRAFT DISTRIBUTED STORAGE SYSTEM BASED ON ADL

Abstract

With the development of space technology, more and more data have been generated. Traditional single disk or single device has been unable to meet the new demand on data storage. Therefore, on-orbit distributed storage is an effective way to solve the problem. The architecture of distributed storage system is an important factor that determines its reliability, availability and performance. This paper describes a distributed storage system architecture description language DSS_ADL that based on software architecture description language ADL. With that, a distributed storage system is described, and an optimization method is given to improve the system's reliability and response time. The analysis of the results shows that this method can effectively describe the characteristics of the distributed storage system architecture, and it also can be used to optimize the system architecture.