

162162



G00002

Abstract

Managing Filesystem Versions

A system and method for managing logical versions of a filesystem made through a near-instantaneous copy process is provided. Each logical version of the filesystem, including the primary version, is assigned a unique epoch number or other identifying value, and each filesystem object is assigned two epoch numbers that define the space of logical versions for which the object exists. A list of all valid epoch numbers are maintained in a version table. The near-instantaneous creation of a logical version of the filesystem requires inserting a unique epoch number entry in the version table (106) and the next epoch number to the new logical version. An original state of the system is preserved through the use of a copy-on-write procedure for filesystem objects that are reference by that logical filesystem version (120). Accordingly, filesystem versions are maintained and original states of previous states of the logical filesystem versions are preserved.

FIG. 3