

计算机系统结构作业六

1. (10.7) 在基于总线的小型多处理器系统上，采用写直达 Cache。将图 10.6 与 10.7 中的基于监听 Cache 一致性协议改为写直达 Cache，且采用不按写分配。画出状态转换图。

2. Suppose there is a 3-state protocol for write back cache. The states include (1) Modified (one-cache, dirty); (2) Shared (possibly many caches, clean); and (3) Invalid (no caches). You will be modifying the 3-state protocol by splitting the Shared state into two states: Shared, which is a shared, clean state; and Exclusive, which is a private, clean state.

1) Draw the 4-state protocol diagrams

2) Describe why the split provides performance benefit.