

Kahoot!

Cache coherence

1 play • 78 players

A kahoot by Penn State

Questions (6)

1 - Quiz

What is NOT true about cache coherence protocols?

60 sec



Update-based protocol updates local copy on a snoop hit



Update-based protocol can result in a higher cache hit rate



Invalidation-based protocol invalidates local copy on a snoop hit



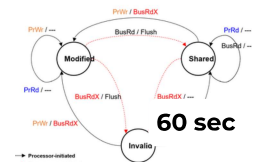
Invalidation-based protocol can result in a higher bus traffic



2 - Quiz

[MULTIPLE CHOICES]What is TRUE about the MSI protocol?

60 sec



Two cores can hold the same block as M state in their private cache.



If one core is holding a block as M state, others can hold it as S state.



If one core is holding a block as M state, others must all have I state.

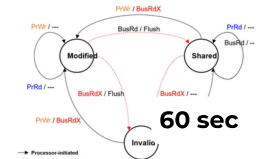


Multiple cores can hold the same block in S state



3 - Quiz

In an MSI protocol, block transitions from I -> S if...



The core read the block



The core wrote to the block



The core observed a read from another core

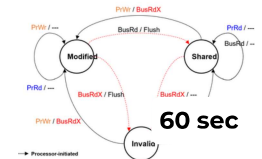


The core observed a write from another core



4 - Quiz

In an MSI protocol, block transitions from I -> M if...



The core read the block



The core wrote to the block



The core observed a read from another core

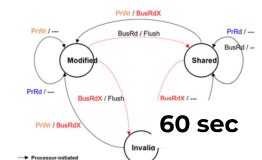


The core observed a write from another core



5 - Quiz

In an MSI protocol, block transitions from S -> I if...



The core read the block



The core wrote to the block



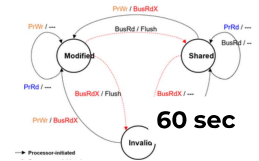
The core observed a read from another core







The core observed a write from another core



[MULTIPLE CHOICES] If a block was at M and if the core observes a read request from another core, what happens?



-  The state becomes S
-  The state becomes I
-  The value is flushed
-  The core sends a BusRdX request

