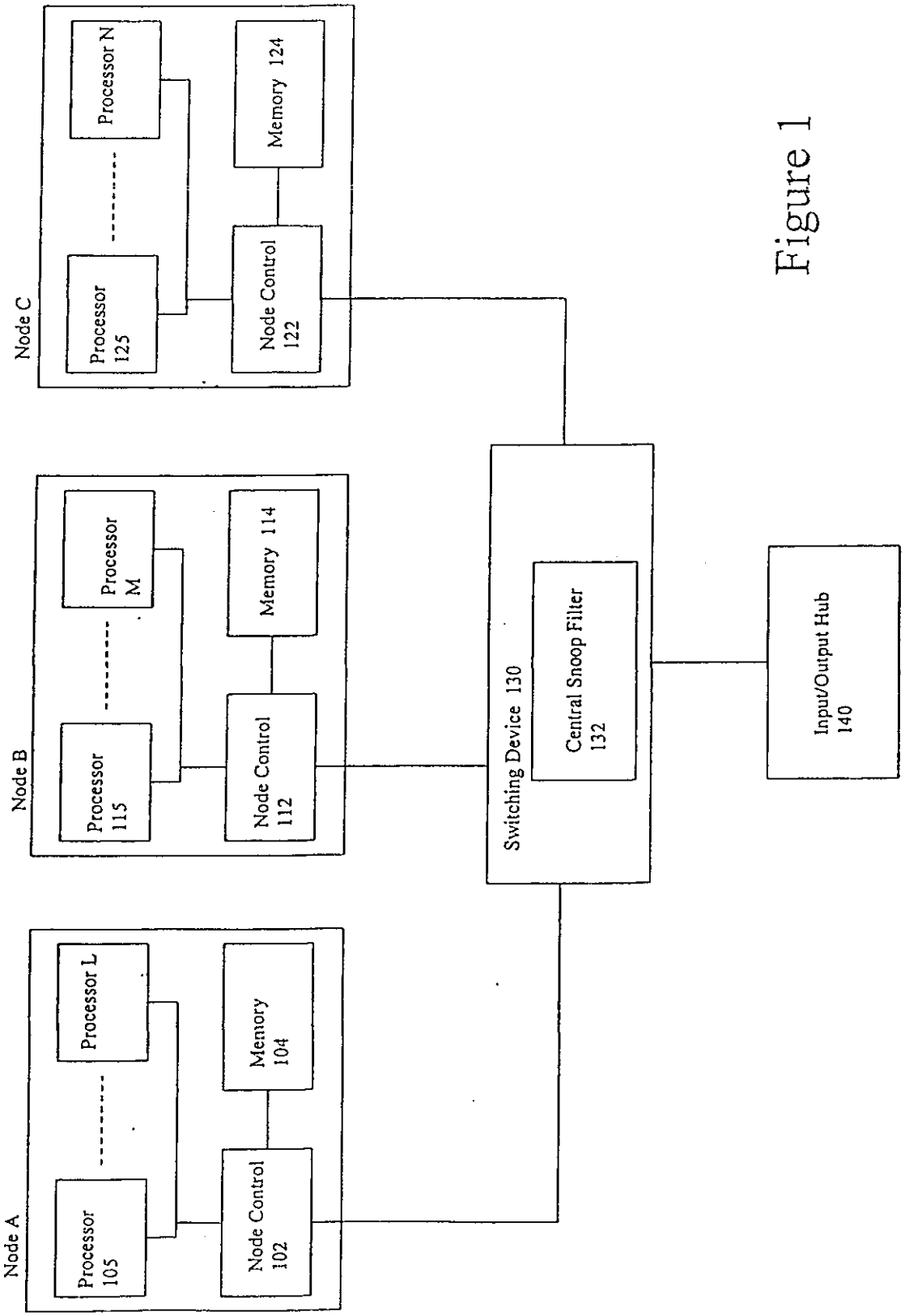

Node C
Processor N
Processor 125
Memory 124
Node Control 122
Node B
Processor M
Processor 115
Memory 114
Node Control 112
Switching Device 130
Central Snoop Filter 132
Input/Output Hub 140
Node A
Processor L
Processor 105
Memory 104
Node Control 102

Figure 1

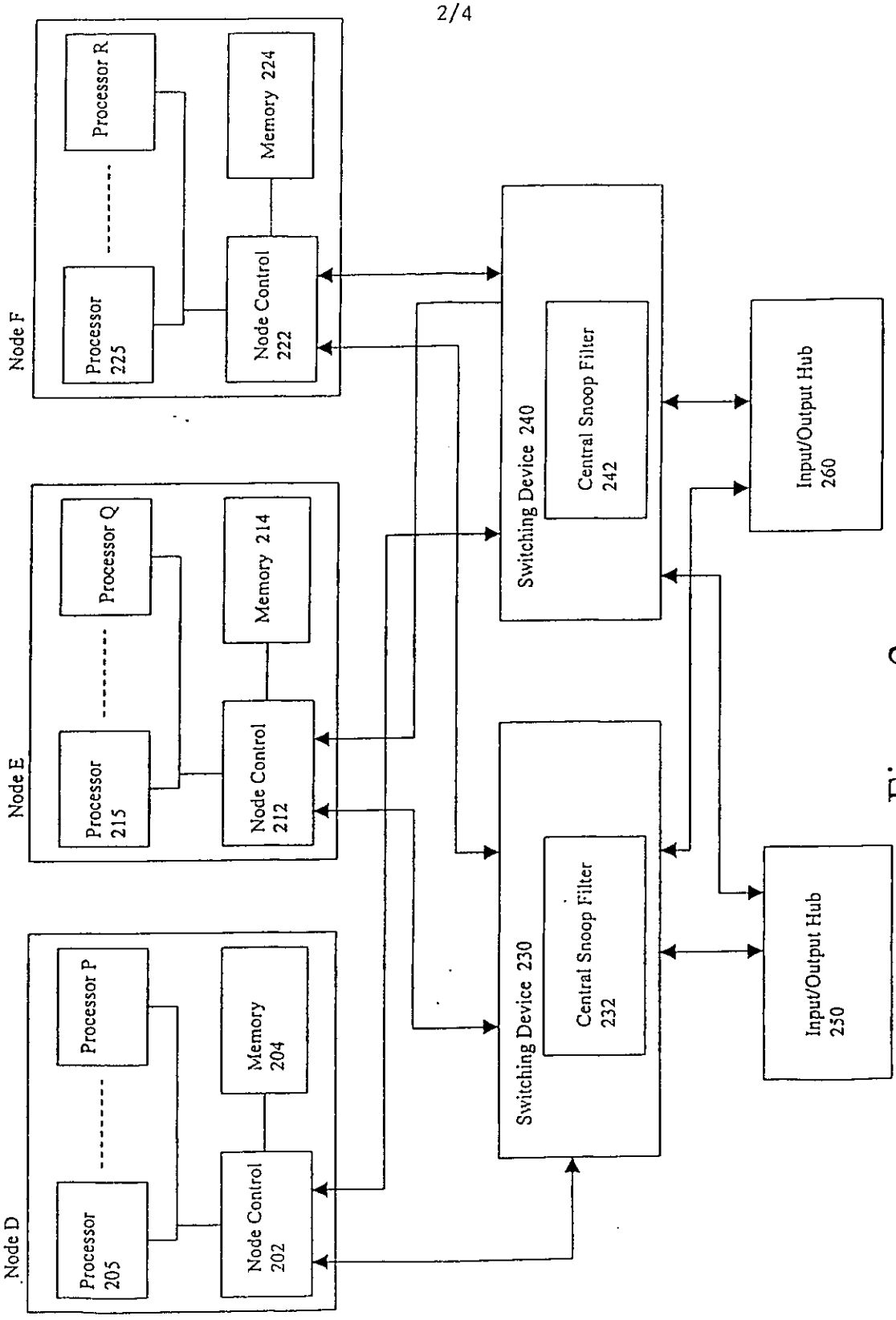

Node F
Processor R
Processor 225
Memory 224
Node Control 222
Node E
Processor Q
Processor 215
Memory 214
Node Control 212
Node D
Processor P
Processor 205
Memory 204
Node Control 202
Switching Device 240
Central Snoop Filter 242
Switching Device 230
Central Snoop Filter 232
Input/Output Hub 260
Input/Output Hub 250

Figure 2

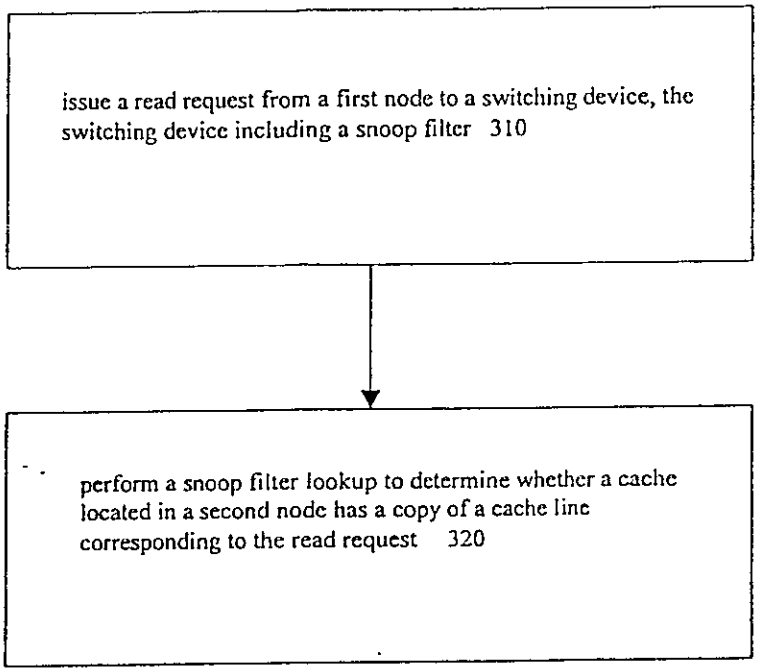

issue a read request from a first node to a switching device, the switching device including a snoop filter 310
perform a snoop filter lookup to determine whether a cache located in a second node has a copy of a cache line corresponding to the read request 320

Figure 3

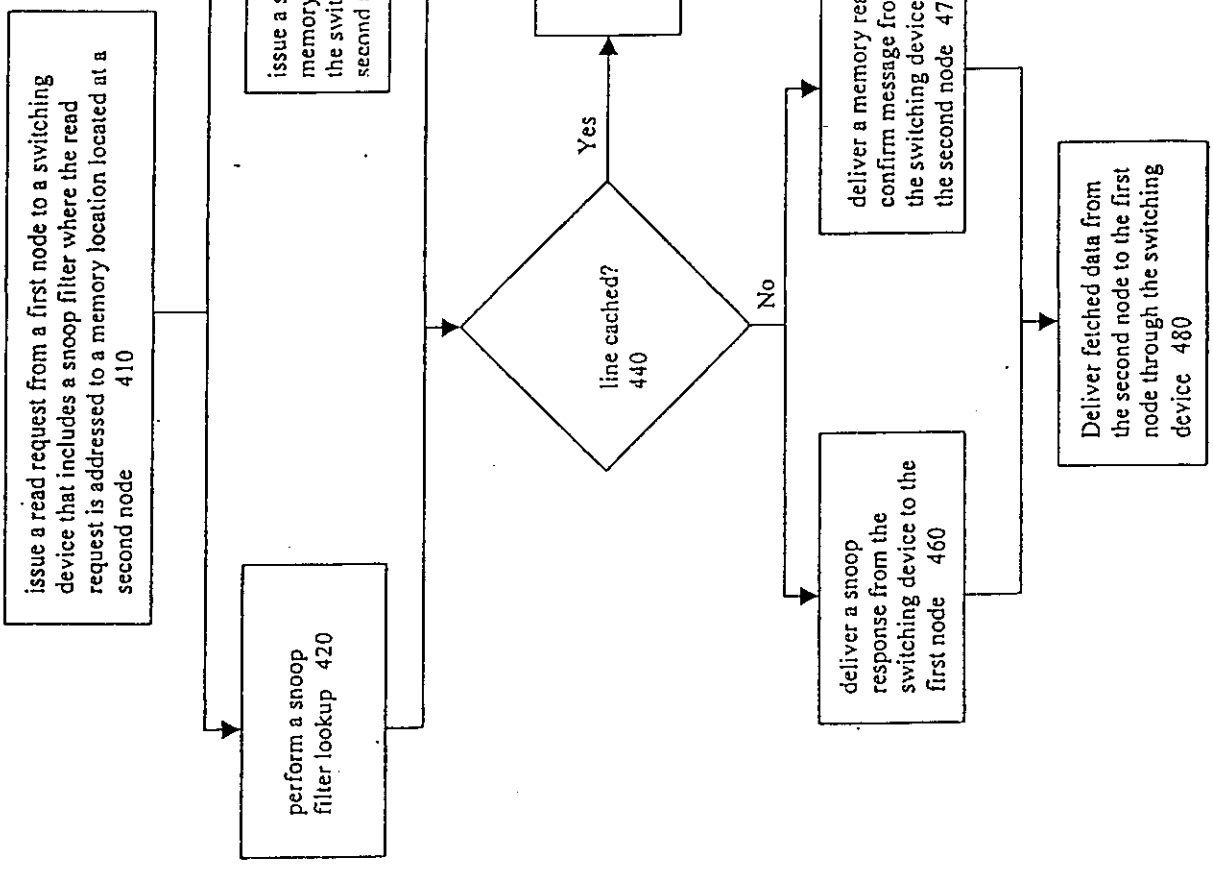

issue a read request from a first node to a switching device that includes a snoop filter where the read request is addressed to a memory location located at a second node 410
perform a snoop filter lookup 420
issue a speculative memory read fetch from the switching device to the second node 430
line cached? 440
Yes
perform cached line algorithm 450
No
deliver a snoop response from the switching device to the first node 460
deliver a memory read confirm message from the switching device to the second node 470
Deliver fetched data from the second node to the first node through the switching device 480

Figure 4