- 1. abstraction:NodeID
- 2. crash point:before read
- 3. bug type:data race
- 1. timing:crash

```
/*sytem version:hadoop-2.7.2
2 *org.apache.hadoop.yarn.server.resourcemanager.scheduler.capac
   ity.CapacityScheduler.completedContainer#1416
  * need calling contex, 10 callers
3
4
   FiCaSchedulerNode node = getNode(container.getNodeId());
5
6
     @Lock(Lock.NoLock.class)
7
     public FiCaSchedulerNode getNode(NodeId nodeId) {
8
       return nodes.get(nodeId);
9
     }
10
```