```java
public class CohortLock implements Lock {
  final Lock globalLock;
  final ClusterLocal<CohortDetectionLock> clusterLock;
  final TurnArbiter localPassArbiter;
  ClusterLocal<Boolean> passedLocally;
  public CohortLock(Lock gl, ClusterLocal<CohortDetectonLock> cl, int passLimit) {
    globalLock = gl;
    clusterLock = cl;
    localPassArbiter = new TurnArbiter(passLimit);
  }
  public void lock() {
    clusterLock.get().lock();
    if (passedLocally.get()) return;
    globalLock.lock();
  }
  public void unlock() {
    CohortDetectionLock cl = clusterLock.get();
    if (cl.alone() || !localPassArbiter.goAgain()) {
      localPassArbiter.passed();
      passedLocally.set(false);
      globalLock.unlock();
    } else {
      localPassArbiter.wentAgain();
      passedLocally.set(true);
    }
    cl.unlock();
  }
}
```

FIGURE 7.19 The CohortLock class.