

1. abstraction:HServerInfo
2. crash point:before read
3. bug type:data race
4. timing:crash

```
1  /* system-version:hbase-0.90.2
2   * crash
   point:org.apache.hadoop.hbase.master.AssignmentManager#unassign#1107
3   * need calling contex: three caller, only one cause bugs
4  */
5  /*private final SortedMap<HRegionInfo,HServerInfo> regions =
6      new TreeMap<HRegionInfo,HServerInfo>();*/
7  //regions is infered from HServerInfo
8      HServerInfo server = null;
9      synchronized (this.regions) {
10          server = regions.get(region);//before read
11      }
```