# NetworkTopology

表示一个网络上的节点层级树，最外层的叶节点即computer，computer上面一级是rack

属性：

1. InnerNode clusterMap = **new** InnerNode(InnerNode.*ROOT*); // the root
2. **private** **int** numOfRacks = 0; // rack counter
3. **private** ReadWriteLock netlock;

方法：

1. **public** **int** getDistance(Node node1, Node node2)

定义node和其parent的距离为1，两个node之间的距离，为他们到共同祖先距离的和

## InnerNode

InnerNode继承自NodeBase

/\* Inner Node represent a switch/router of a data center or rack.

\* Different from a leave node, it has non-null children.

\*/

属性：

1. **private** ArrayList<Node> children=**new** ArrayList<Node>();
2. **private** **int** numOfLeaves;

# NodeBase

NodeBase实现了Node接口

属性：

1. **protected** String name; //host:port#
2. **protected** String location; //string representation of this node's location

name和location可以定位一个节点，如：/a/b/c,c就是name，/a/b就是location

1. **protected** **int** level; //which level of the tree the node resides
2. **protected** Node parent; //its parent