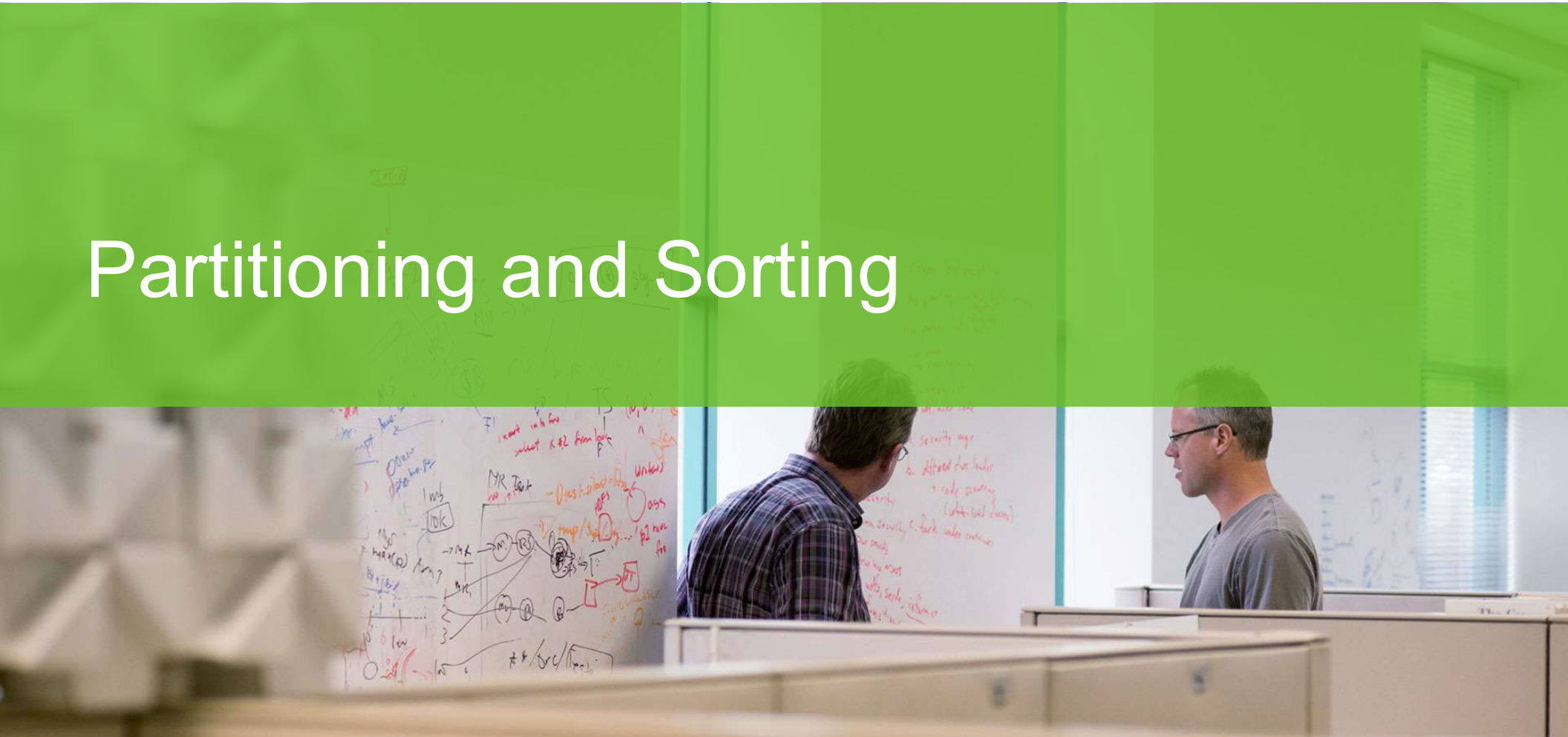
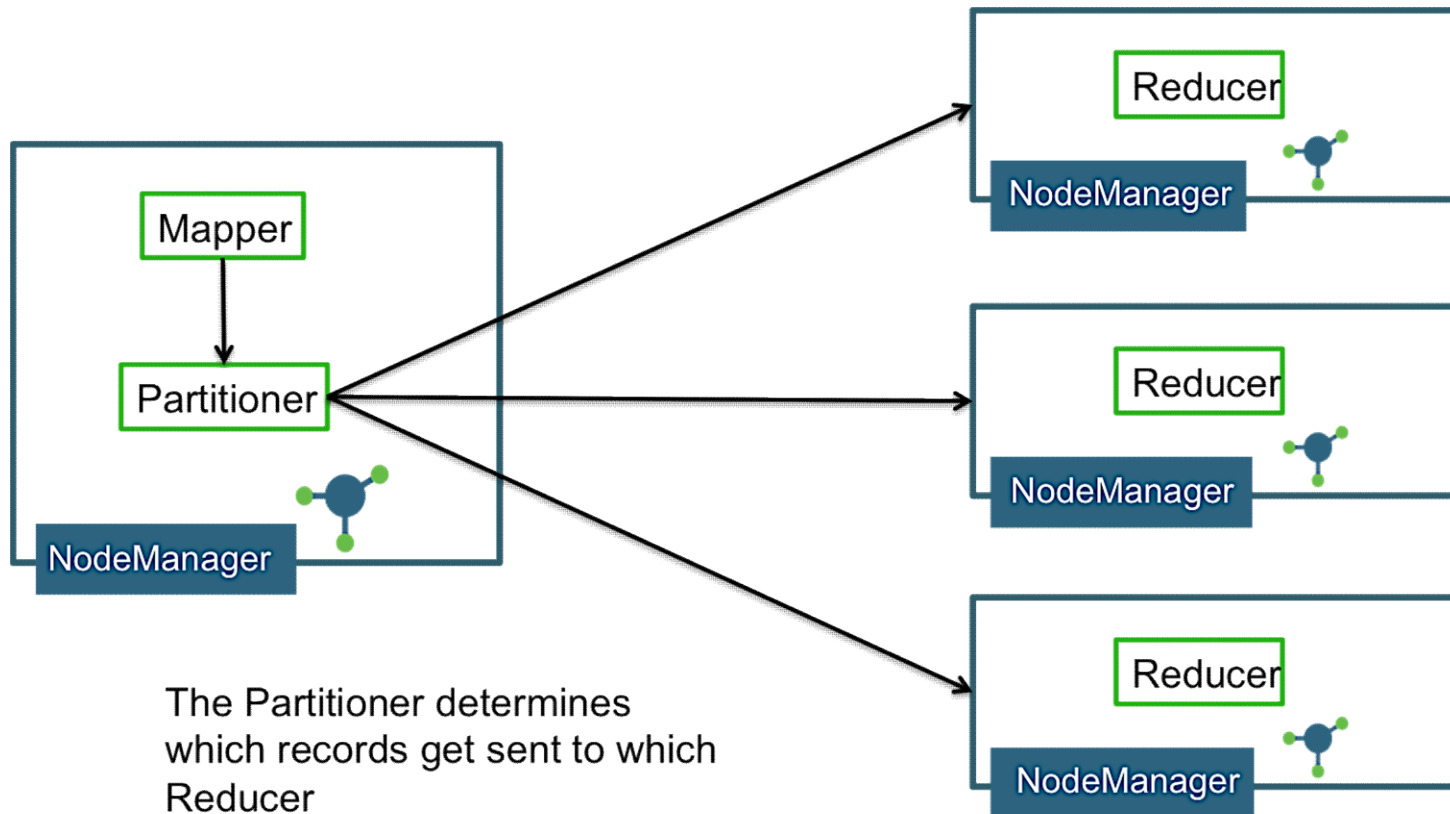


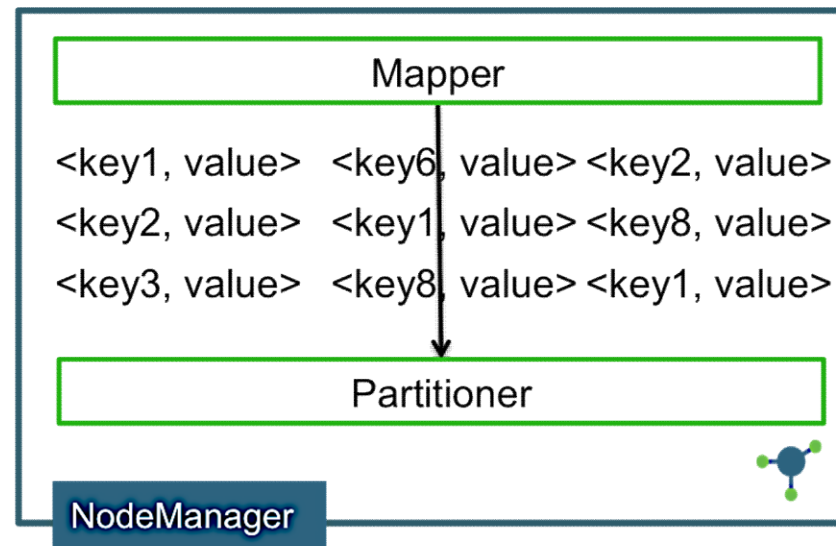
Partitioning and Sorting



What is a Partitioner?

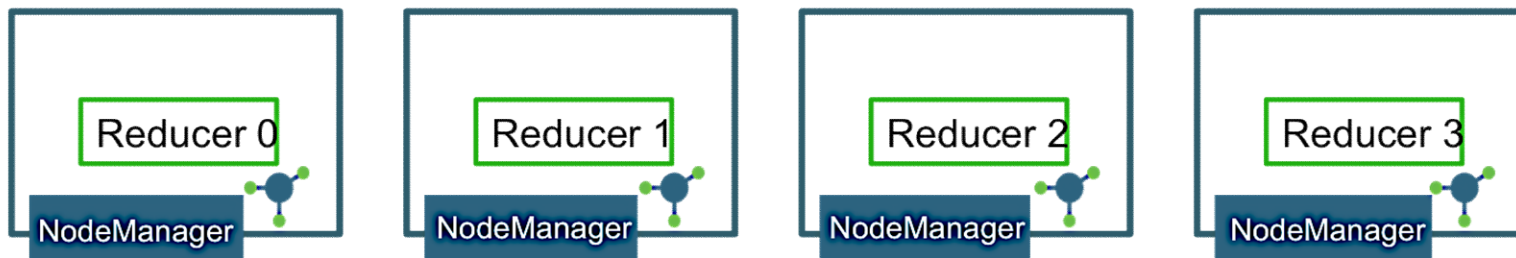


1 The Mapper outputs
<key,value>
pairs



2 Each pair is
passed to the
Partitioner

3 The getPartition
method returns an int
between 0 and the
number of Reducers
minus 1



The Default Partitioner

```
public class HashPartitioner<K, V>
    extends Partitioner<K, V>
{
    public int getPartition(K key, V value,
                           int numReduceTasks) {
        return (key.hashCode()
                & Integer.MAX_VALUE)
               % numReduceTasks;
    }
}
```

Writing a Custom Partitioner

```
public class WordCountPartitioner
    extends Partitioner<Text, IntWritable> {
    public int getPartition(Text key,
        IntWritable value,
        int numReduceTasks) {
        if(numReduceTasks == 1) {
            return 0;
        }
        return (key.toString().length()
            * value.get()) % numReduceTasks;
    }
}
```