FPC lista 1 - questão 5: boxplots

David Ferreira Quaresma (david.quaresma@ccc.ufcg.edu.br), Renato Dantas Henriques (renato.henriques@ccc.ufcg.edu.br)

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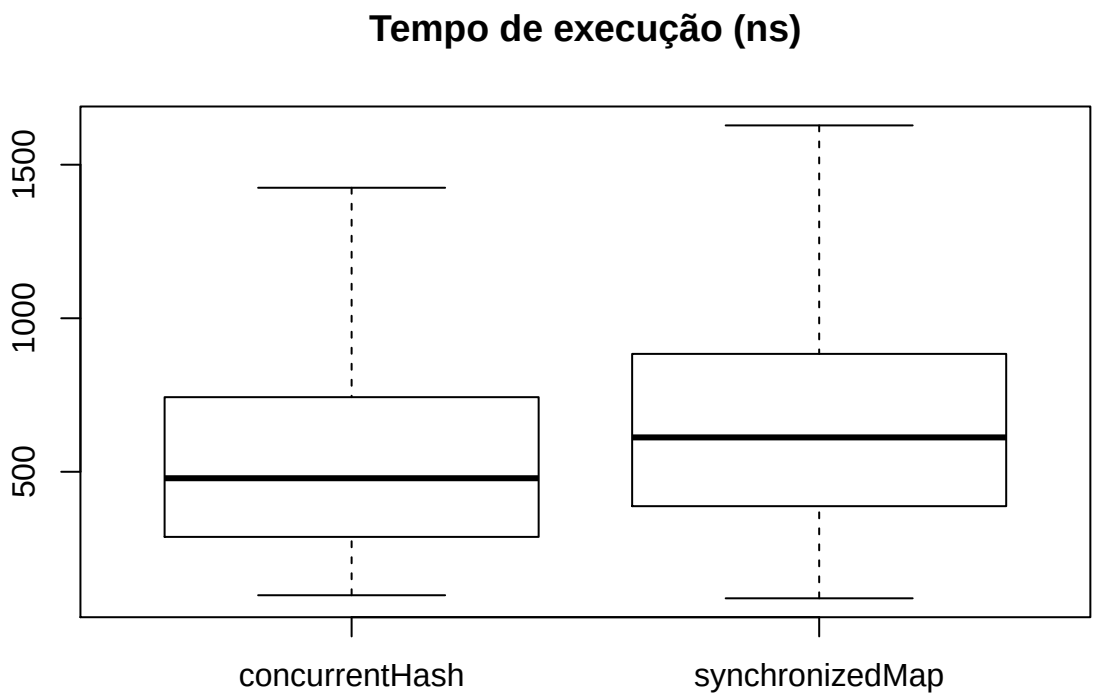
Letra A

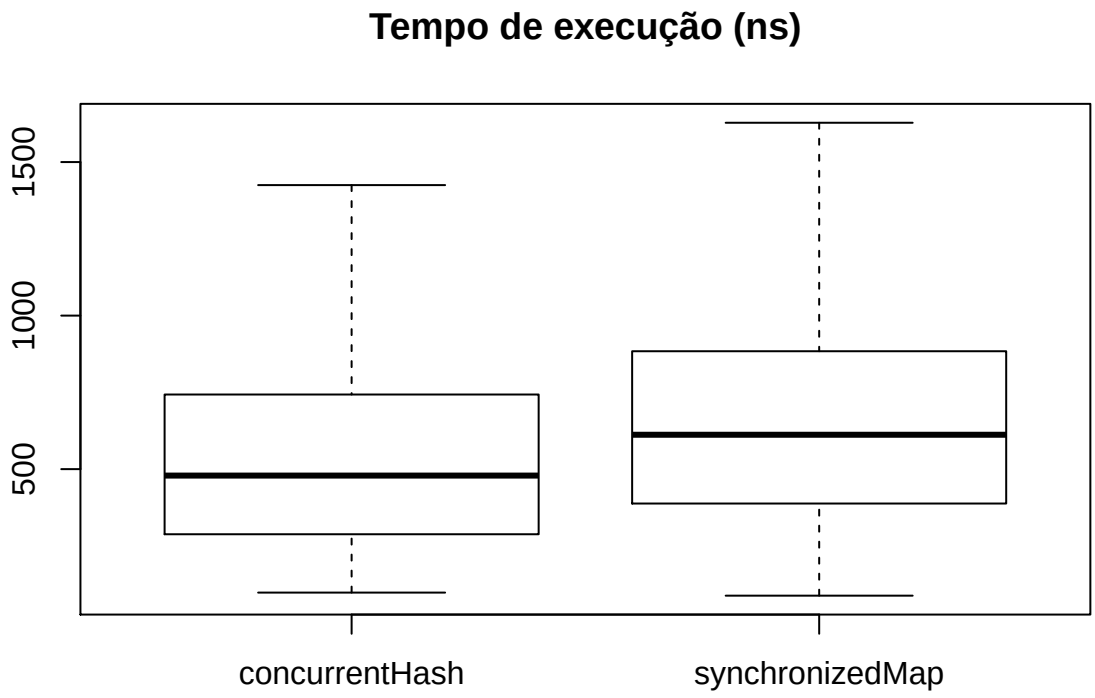
```
concurrentHash = read.csv("./results/concurrentHash-t1024-r0.5.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t1024-r0.5.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



ECDF - 1024 threads, 50/50 read/write

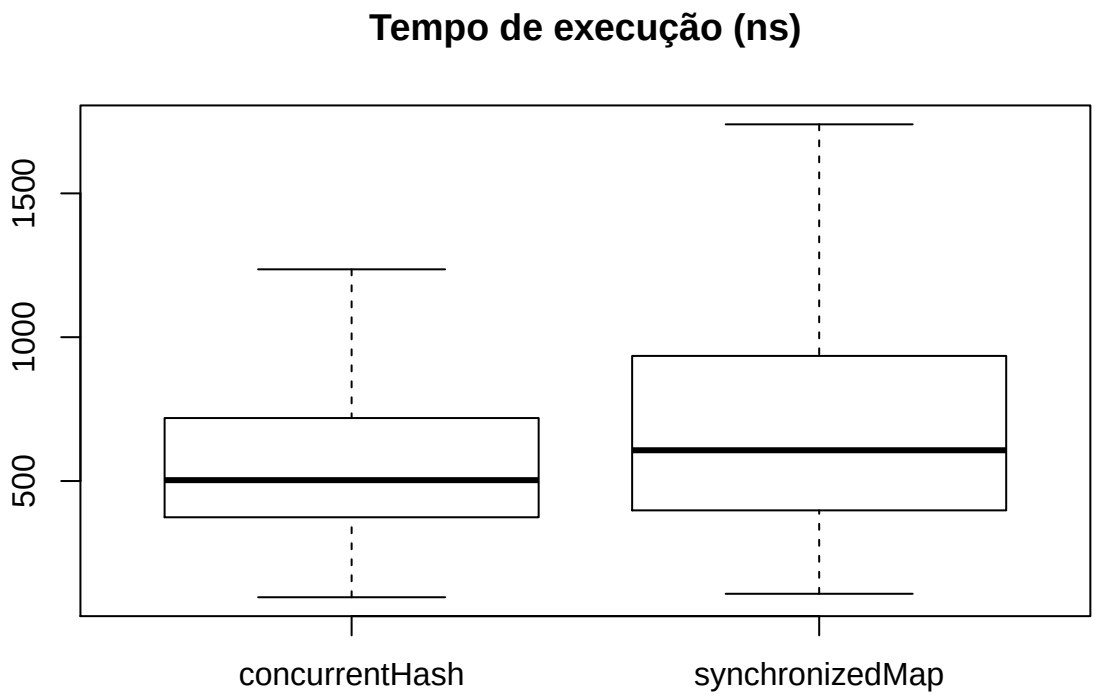
```
concurrentHash = read.csv("./results/concurrentHash-t1024-r0.5.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t1024-r0.5.csv", header=T, dec=".")
```

```
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



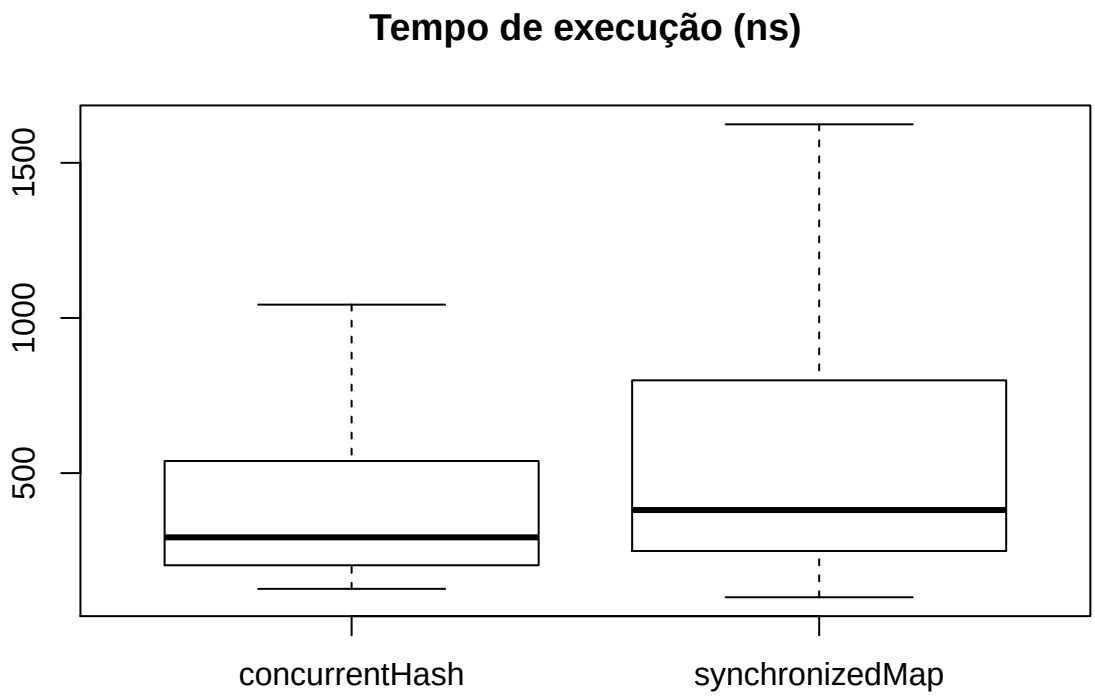
ECDF - 1024 threads, 90/10 read/write

```
concurrentHash = read.csv("./results/concurrentHash-t1024-r0.9.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t1024-r0.9.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



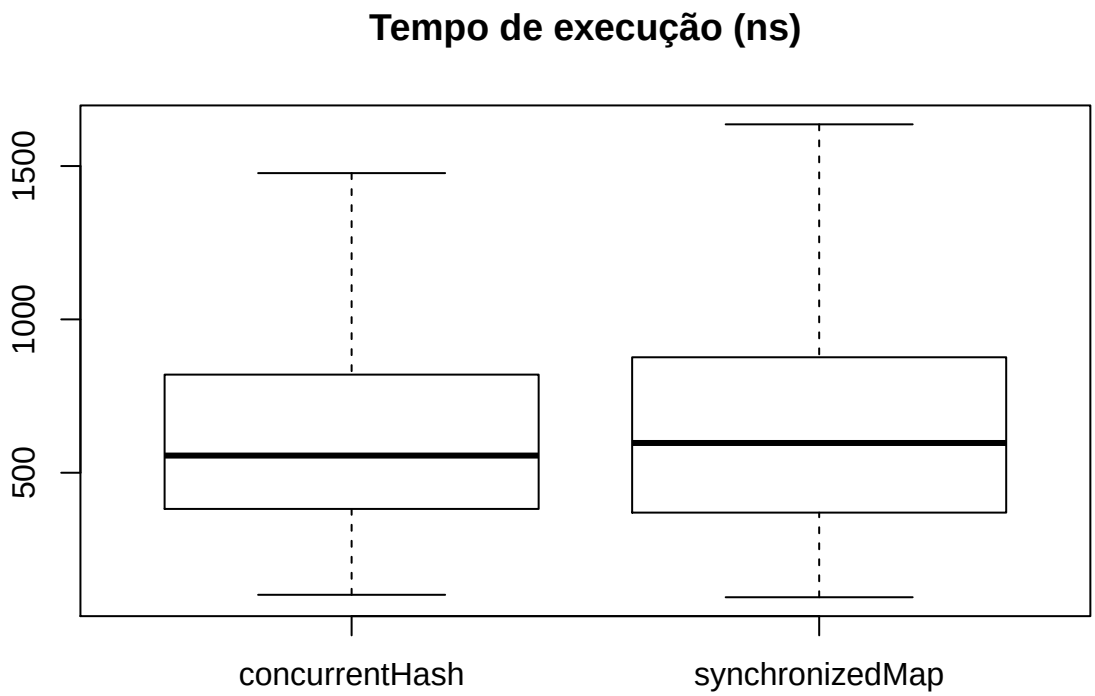
ECDF - 1024 threads, 10/90 read/write

```
concurrentHash = read.csv("./results/concurrentHash-t1024-r0.1.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t1024-r0.1.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



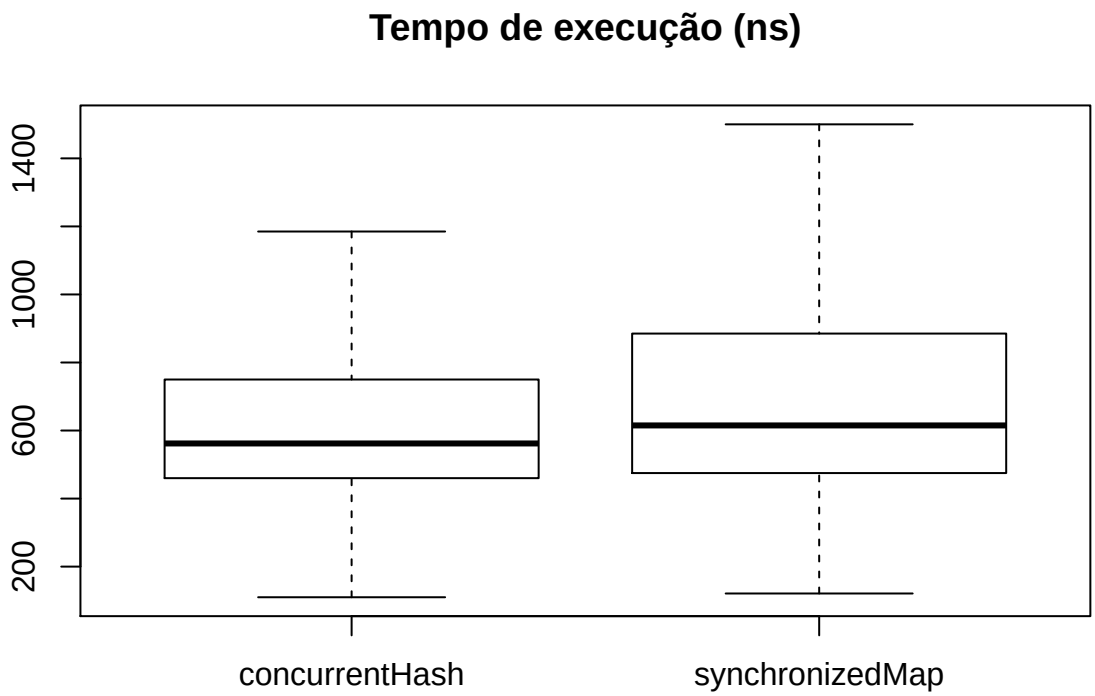
ECDF - 128 threads, 50/50 read/write

```
concurrentHash = read.csv("./results/concurrentHash-t128-r0.5.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t128-r0.5.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



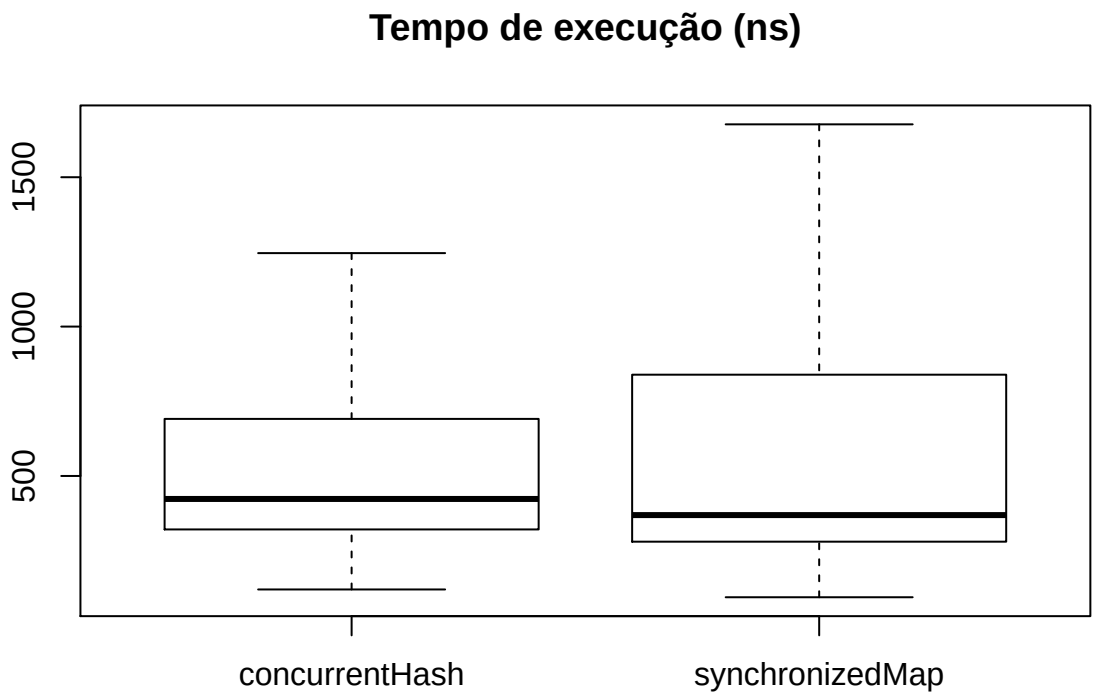
ECDF - 128 threads, 90/10 read/write

```
concurrentHash = read.csv("./results/concurrentHash-t128-r0.9.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t128-r0.9.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



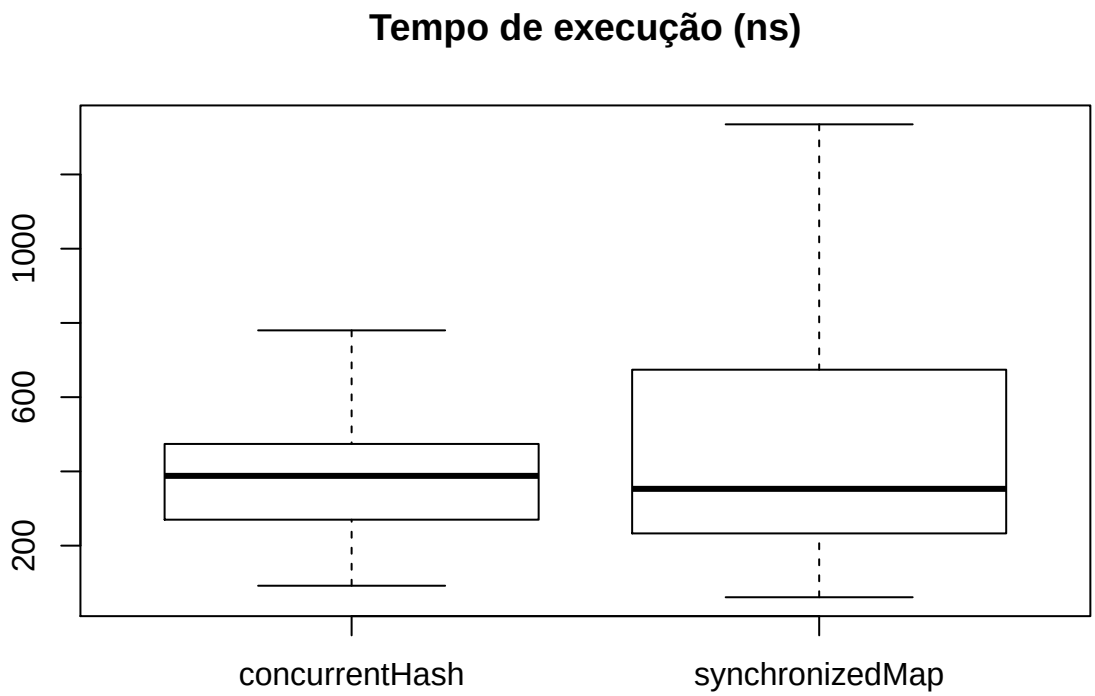
ECDF - 128 threads, 10/90 read/write

```
concurrentHash = read.csv("./results/concurrentHash-t128-r0.1.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t128-r0.1.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



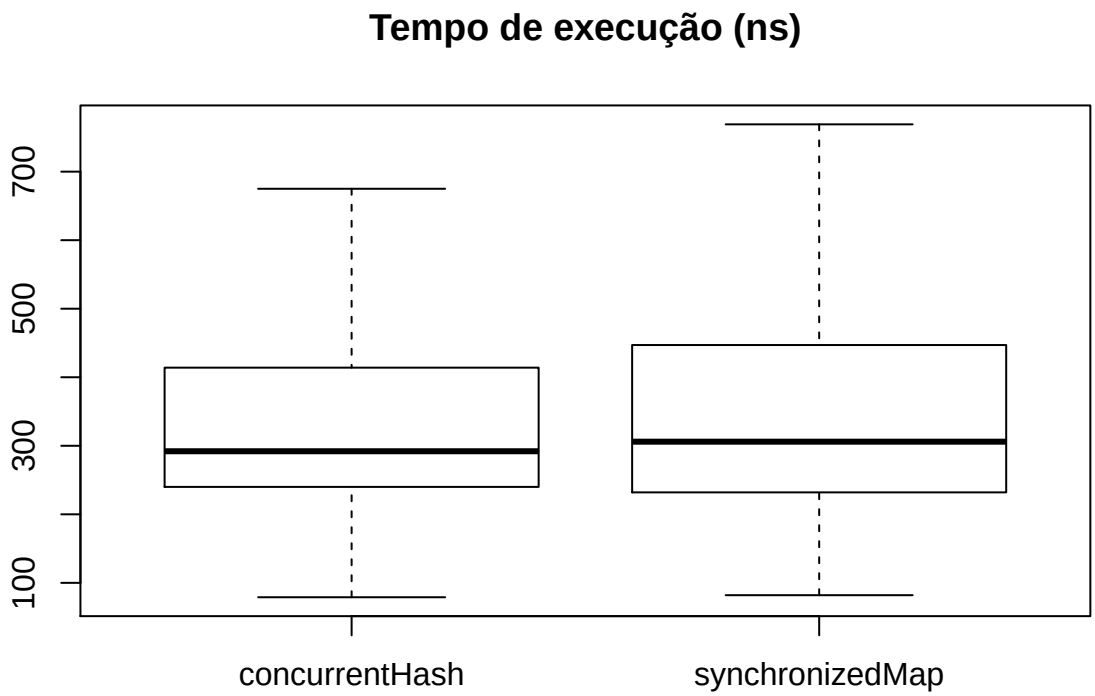
ECDF - 1 threads, 50/50 read/write

```
concurrentHash = read.csv("./results/concurrentHash-t1-r0.5.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t1-r0.5.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



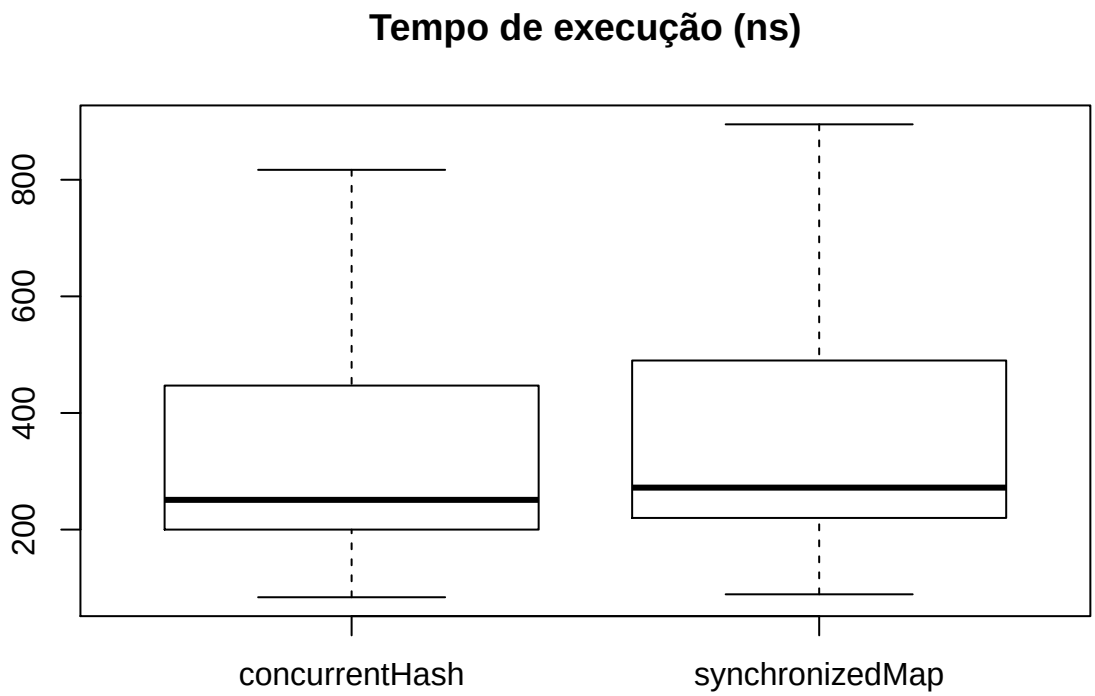
ECDF - 1 threads, 90/10 read/write

```
concurrentHash = read.csv("./results/concurrentHash-t1-r0.9.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t1-r0.9.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



ECDF - 1 threads, 10/90 read/write

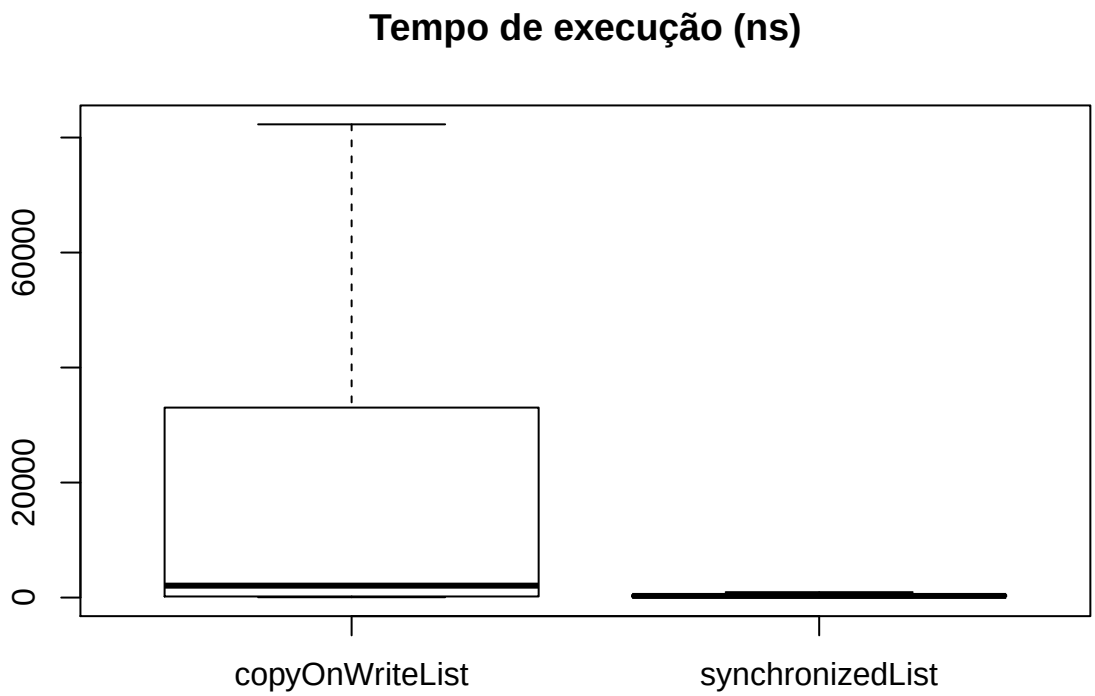
```
concurrentHash = read.csv("./results/concurrentHash-t1-r0.1.csv", header=T, dec=".")
synchronizedMap = read.csv("./results/synchronizedMap-t1-r0.1.csv", header=T, dec=".")
concurrentHash <- filter(concurrentHash, time_in_nanoseconds > 0)
synchronizedMap <- filter(synchronizedMap, time_in_nanoseconds > 0)
boxplot(concurrentHash$time_in_nanoseconds, synchronizedMap$time_in_nanoseconds, outline=FALSE,
        names=c("concurrentHash", "synchronizedMap"), main="Tempo de execução (ns)")
```



Letra B

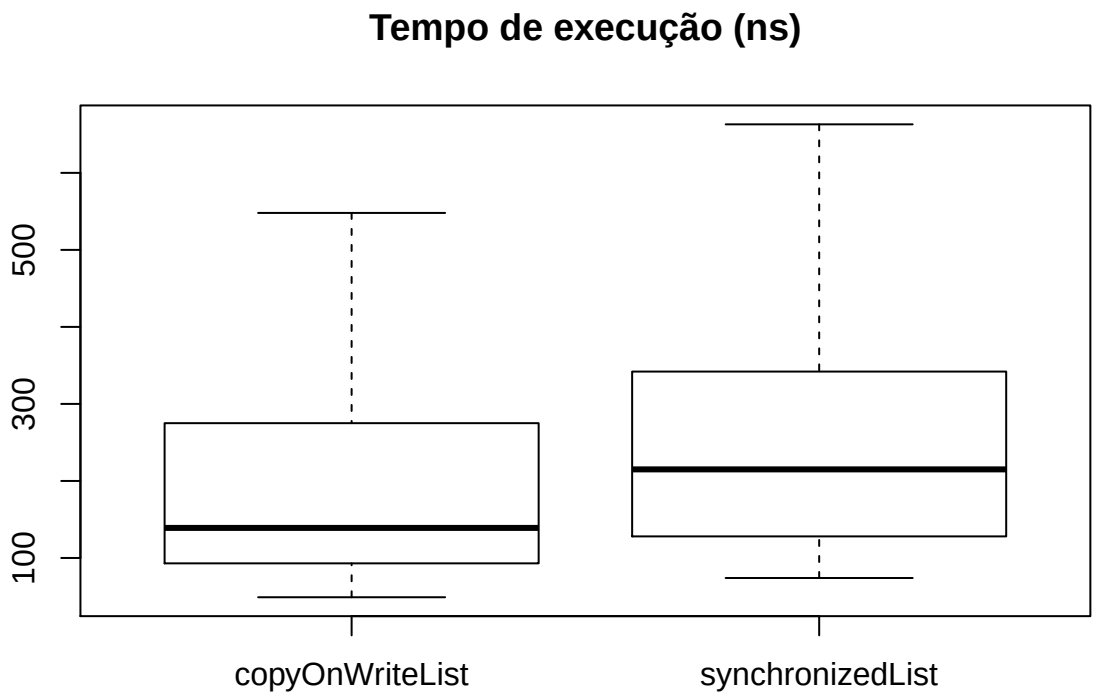
ECDF - 1024 threads, 50/50 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t1024-r0.5.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t1024-r0.5.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



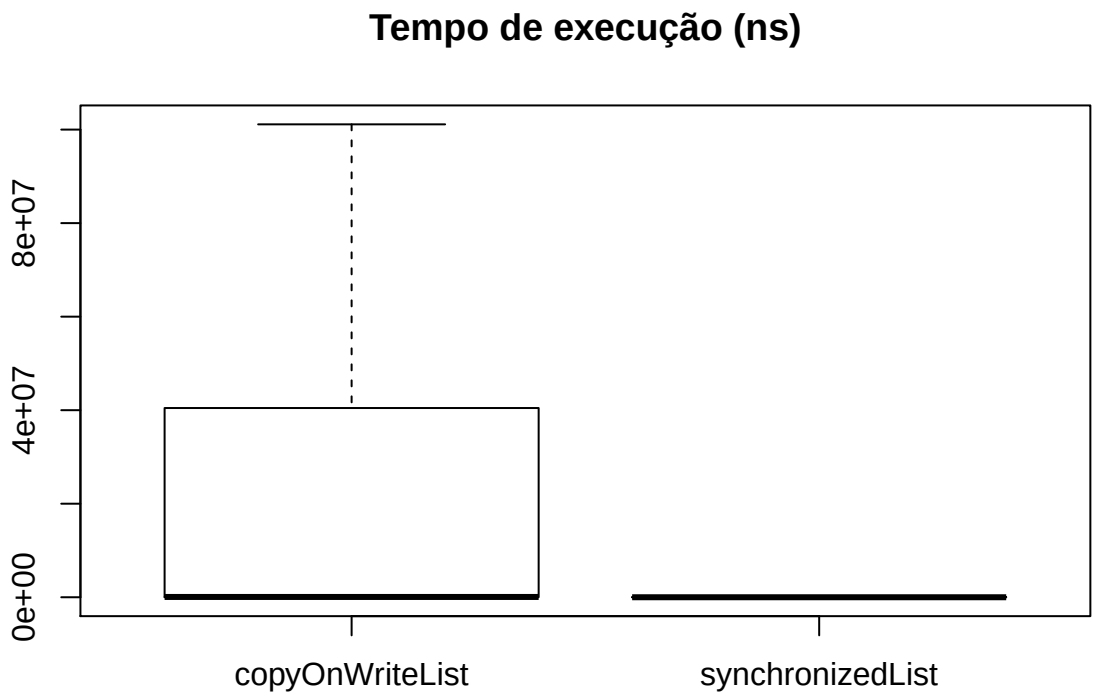
ECDF - 1024 threads, 90/10 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t1024-r0.9.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t1024-r0.9.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



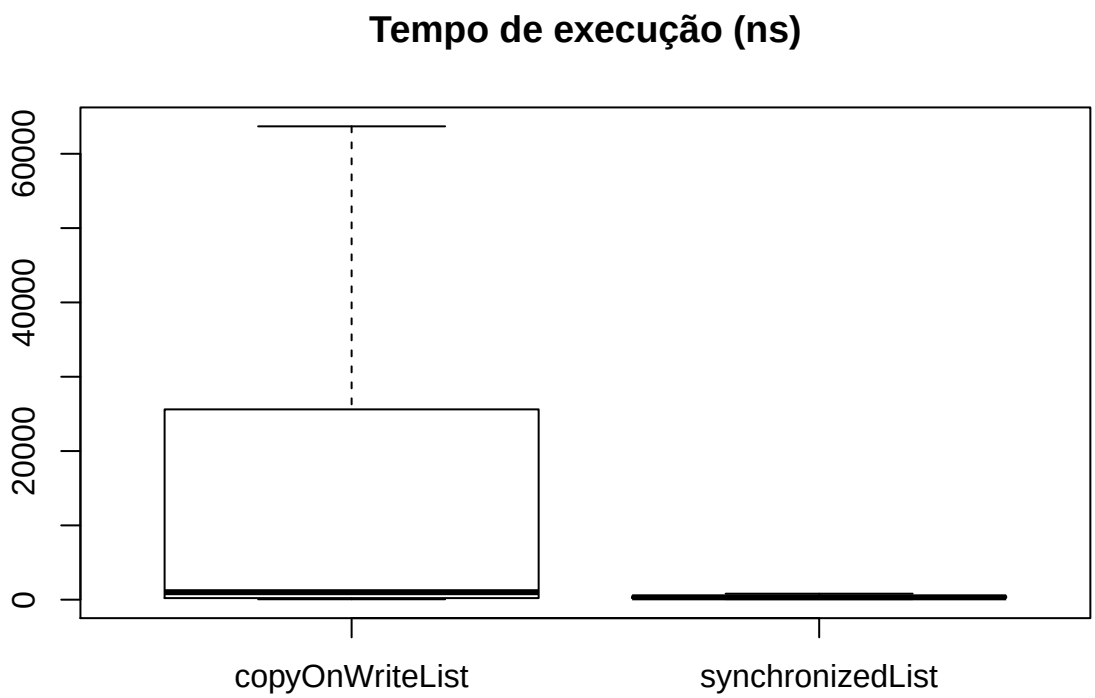
ECDF - 1024 threads, 10/90 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t1024-r0.1.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t1024-r0.1.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



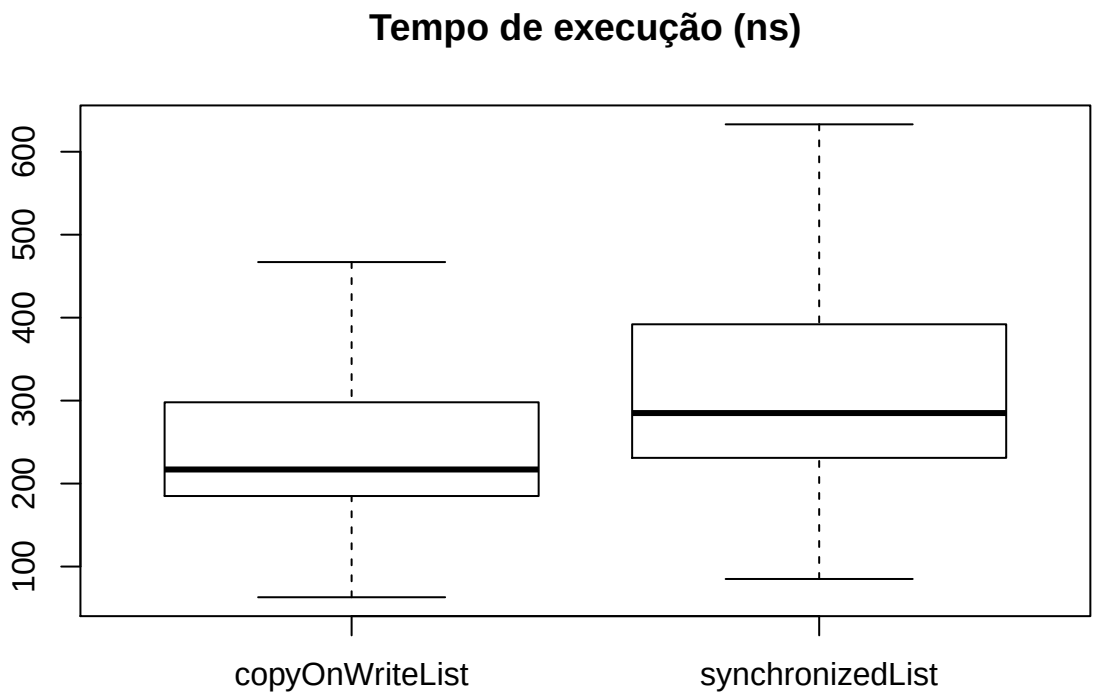
ECDF - 128 threads, 50/50 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t128-r0.5.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t128-r0.5.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



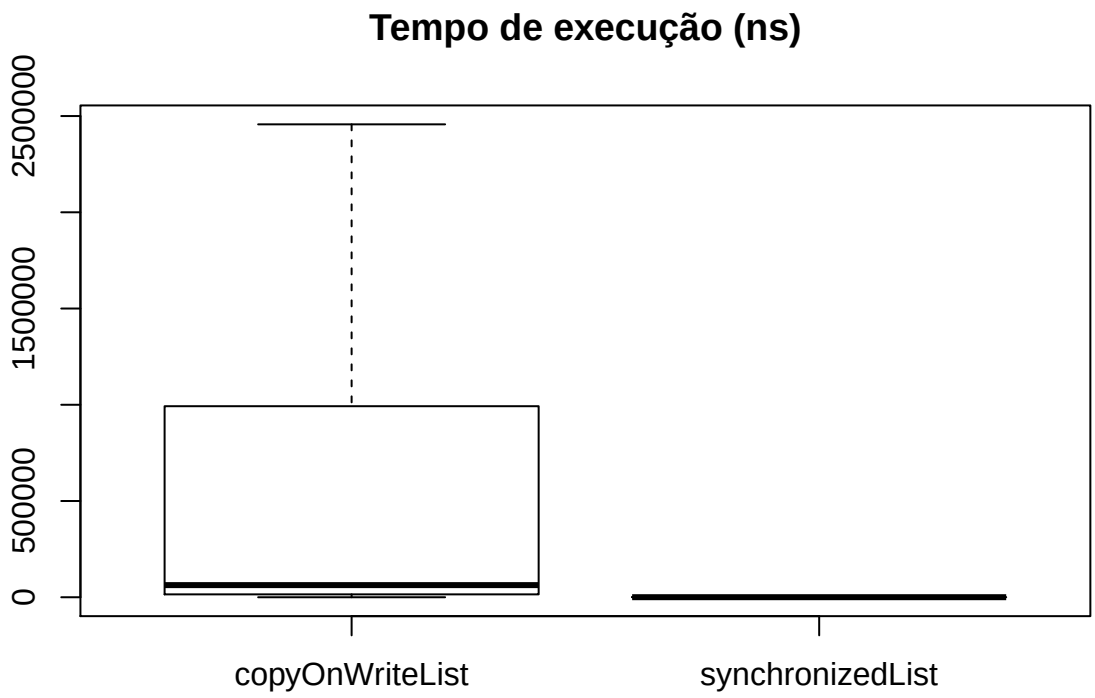
ECDF - 128 threads, 90/10 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t128-r0.9.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t128-r0.9.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



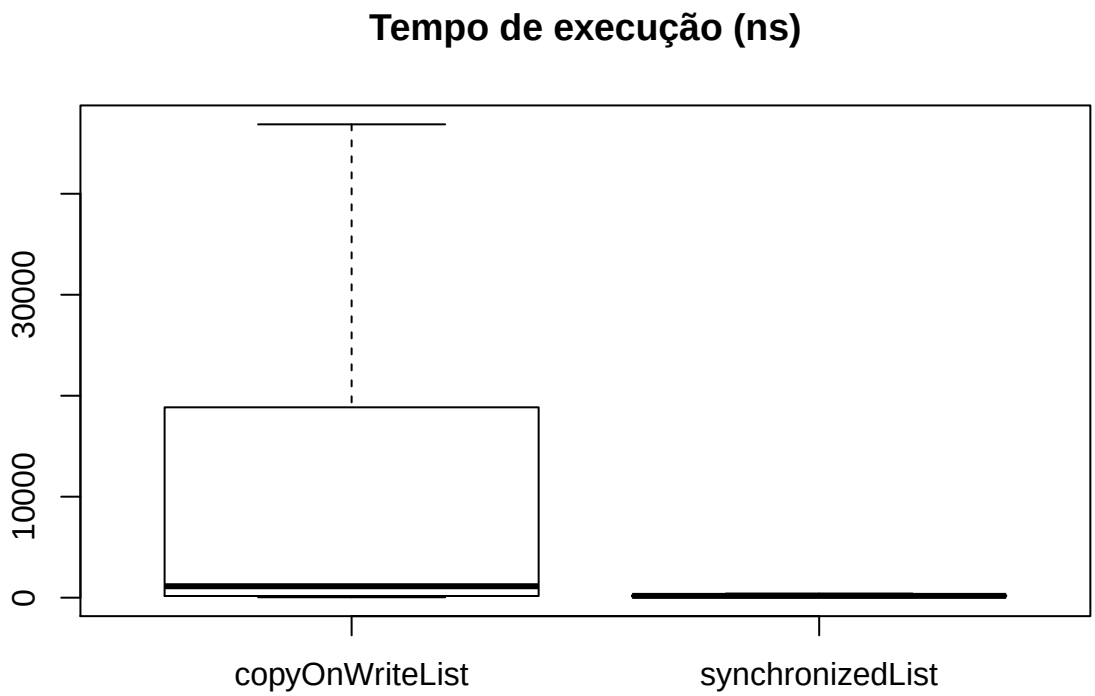
ECDF - 128 threads, 10/90 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t128-r0.1.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t128-r0.1.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



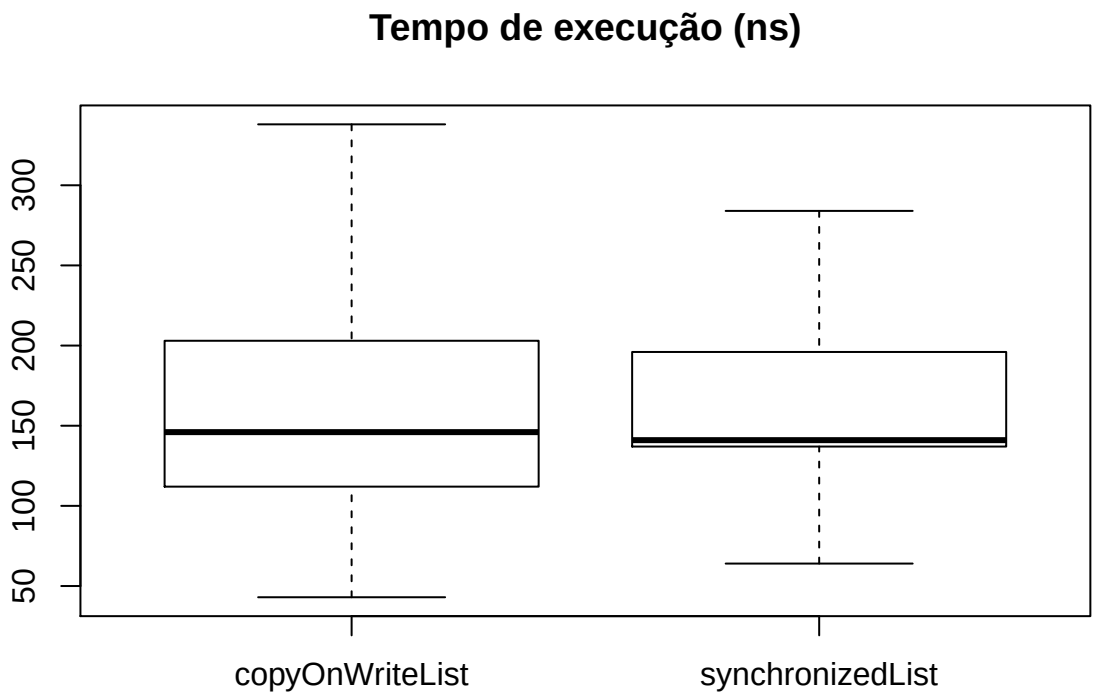
ECDF - 1 threads, 50/50 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t1-r0.5.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t1-r0.5.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



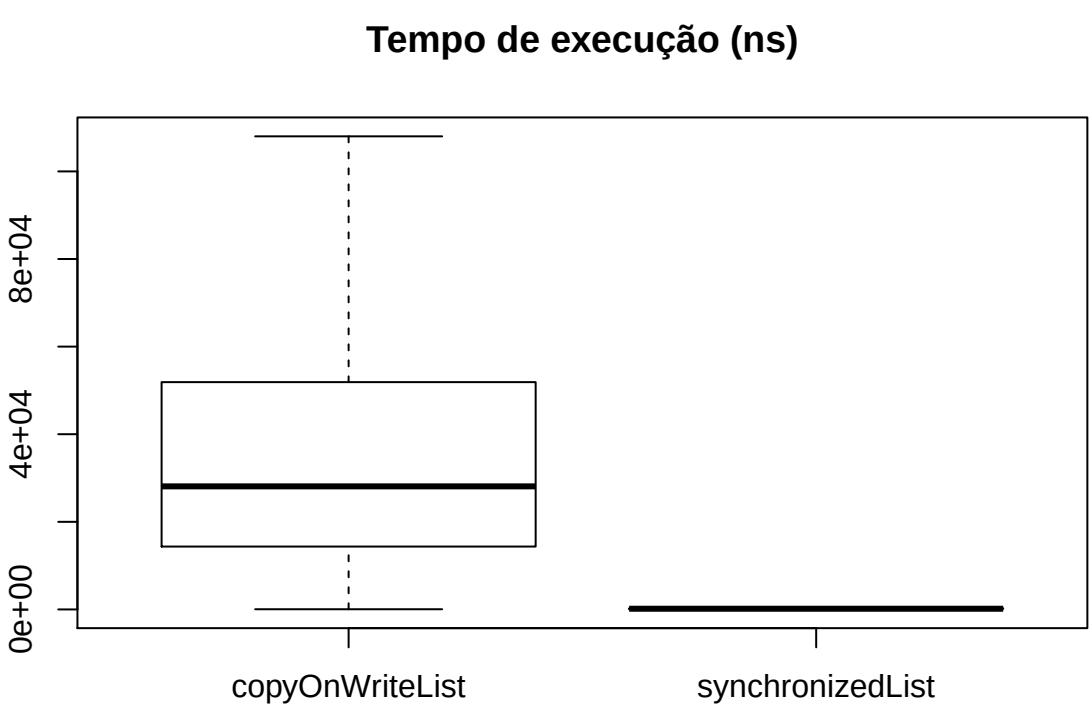
ECDF - 1 threads, 90/10 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t1-r0.9.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t1-r0.9.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```



ECDF - 1 threads, 10/90 read/write

```
copyOnWriteList = read.csv("./results/copyOnWriteList-t1-r0.1.csv", header=T, dec=".")
synchronizedList = read.csv("./results/synchronizedList-t1-r0.1.csv", header=T, dec=".")
copyOnWriteList <- filter(copyOnWriteList, time_in_nanoseconds > 0)
synchronizedList <- filter(synchronizedList, time_in_nanoseconds > 0)
boxplot(copyOnWriteList$time_in_nanoseconds, synchronizedList$time_in_nanoseconds, outline=FALSE,
        names=c("copyOnWriteList", "synchronizedList"), main="Tempo de execução (ns)")
```


Tempo de execução (ns)
0e+00
4e+04
8e+04
copyOnWriteList
synchronizedList