

Análise de dados

Marisangila Alves

7/28/2021

Parâmetros

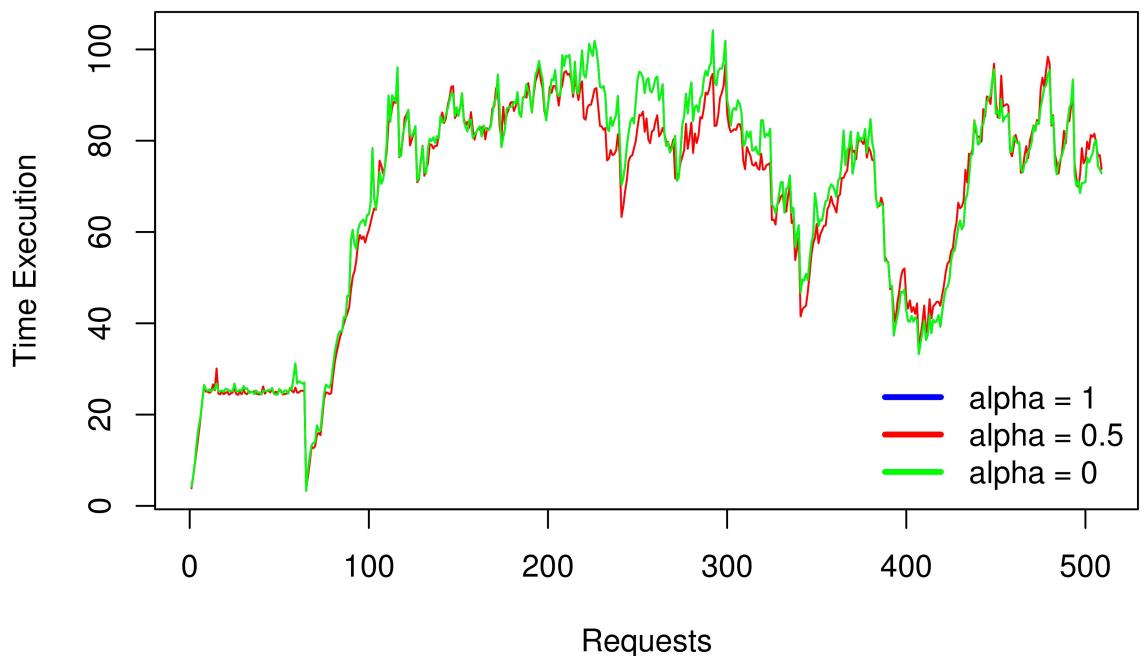
alfa igual a 1 ativa somente migração de servidores, o alfa igual a 0 ativa somente migração de caminhos.

Parâmetros	Valores
alfa	0, 0.5, 1
lambda	5
n	100
beta	0.2
BS	32
Cache	100
UE	200
Resources	MBS 50 SBS 25
Average	MBS 300 SBS 70
RTT inicial	MBS/MBS 0.001 s MBS/SBS 0.0015 SBS/UE 0.002
Tempo da Requisição	10

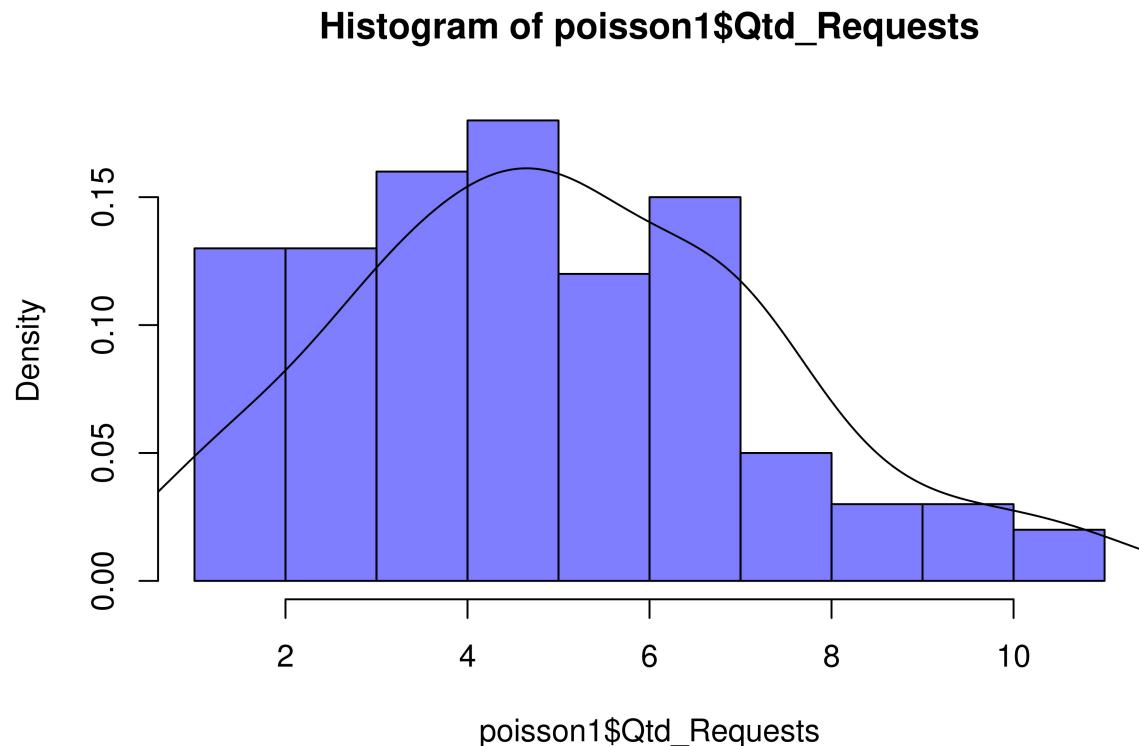
Informações da Aplicação.

Vazão Mínima	Tamanho de Unidade de Cache	Número de Unidades de Cache	Número de Unidades de Recurso
45 Mbps	169 MB	30	5
68 Mbps	255 MB	30	10
56 Mbps	210 MB	30	5
86 Mbps	319 MB	30	10

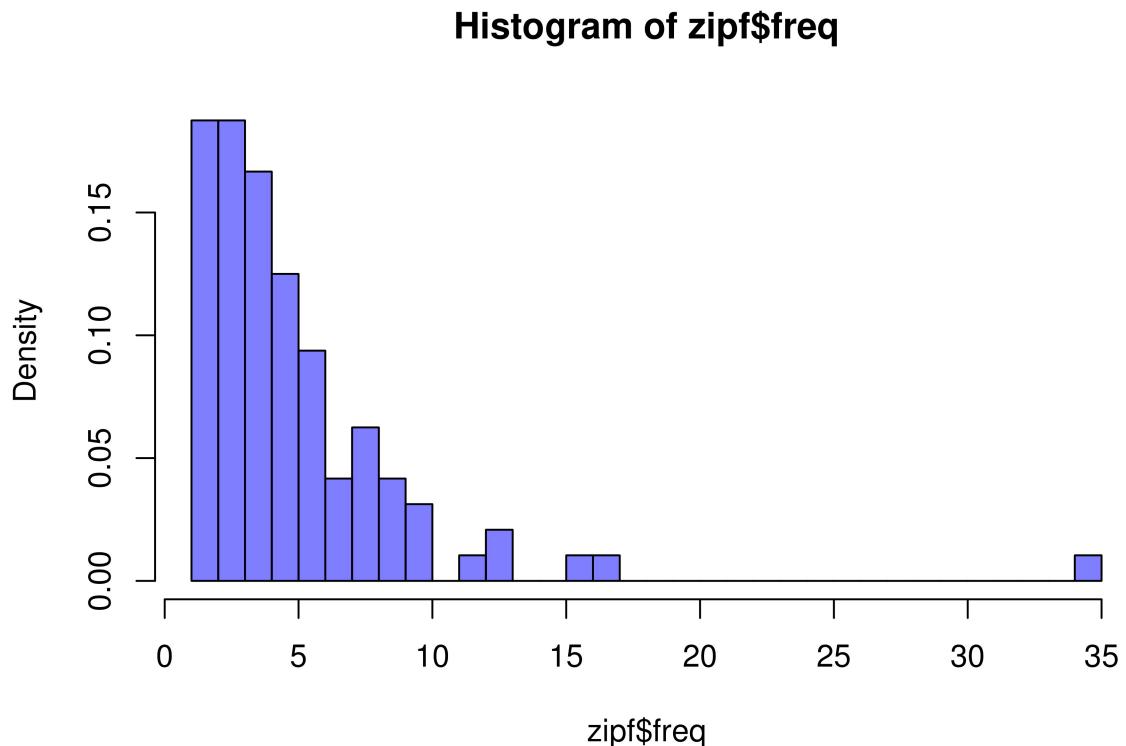
Tempo de execução da otimização.



Distribuição das Requisições.



Distribuição de popularidade do conteúdo solicitado.



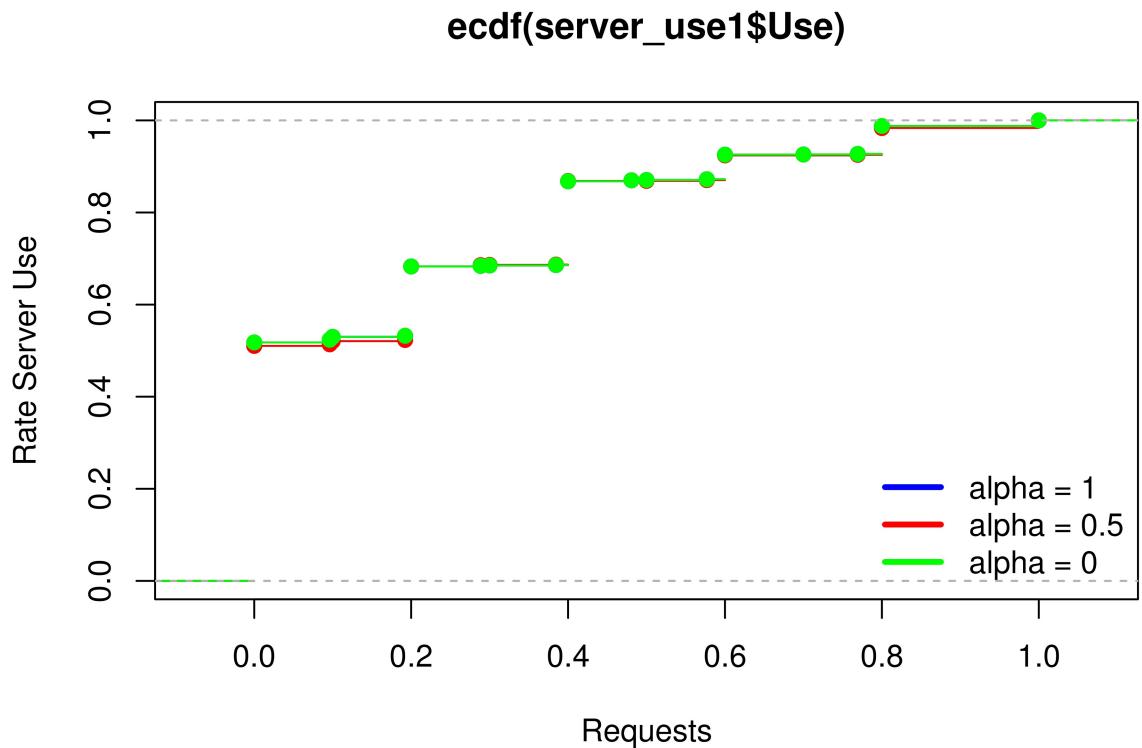
Taxa de requisições alocadas.

$\alpha : 1 = 0.444$

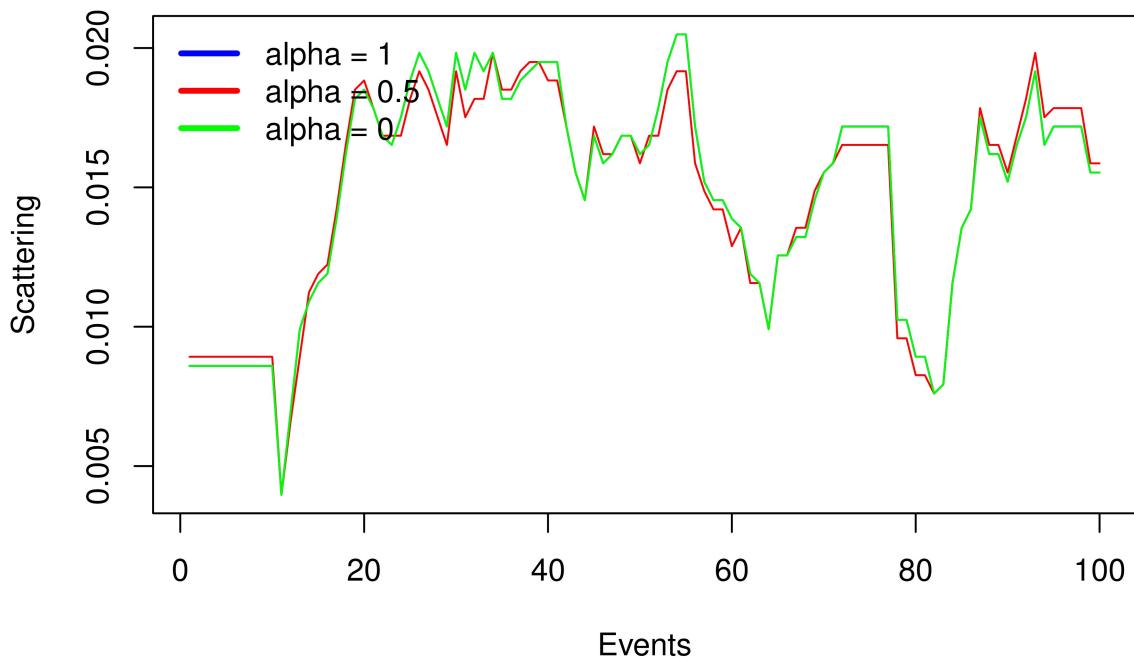
$\alpha : 0.5 = 0.444$

$\alpha : 0 = 0.444$

Uso de servidor por evento.



Fraguimentação de enlaces por evento.



```
##  
## Paired t-test  
##  
## data: scattering1$Scattering and scattering05$Scattering  
## t = 1.7606, df = 99, p-value = 0.08139  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -1.216983e-05 2.038420e-04  
## sample estimates:  
## mean of the differences  
## 9.583609e-05  
  
##  
## Paired t-test  
##  
## data: scattering1$Scattering and scattering0$Scattering  
## t = NaN, df = 99, p-value = NA  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## NaN NaN  
## sample estimates:  
## mean of the differences  
## 0
```

```

## 
## Paired t-test
##
## data: scattering05$Scattering and scattering0$Scattering
## t = -1.7606, df = 99, p-value = 0.08139
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -2.038420e-04 1.216983e-05
## sample estimates:
## mean of the differences
## -9.583609e-05

## [1] "A diferença não é estatisticamente significativa."

```

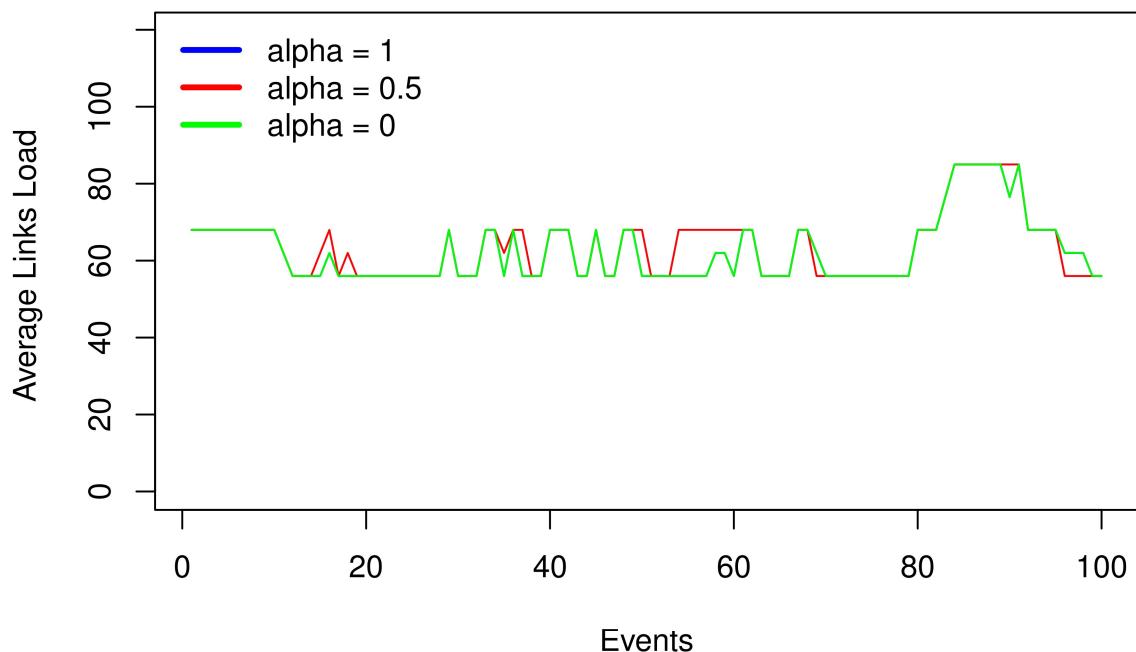
Carga média de enlaces por evento.

```

##      Min. 1st Qu. Median     Mean 3rd Qu.    Max.
##      56.00   56.00   56.00   62.64   68.00   85.00

##      Min. 1st Qu. Median     Mean 3rd Qu.    Max.
##      56.00   56.00   65.00   63.69   68.00   85.00

```



```

## 
## Paired t-test

```

```

## 
## data: load_links_means1 and load_links_means05
## t = -2.8499, df = 99, p-value = 0.005321
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -1.7725592 -0.3174408
## sample estimates:
## mean of the differences
## -1.045

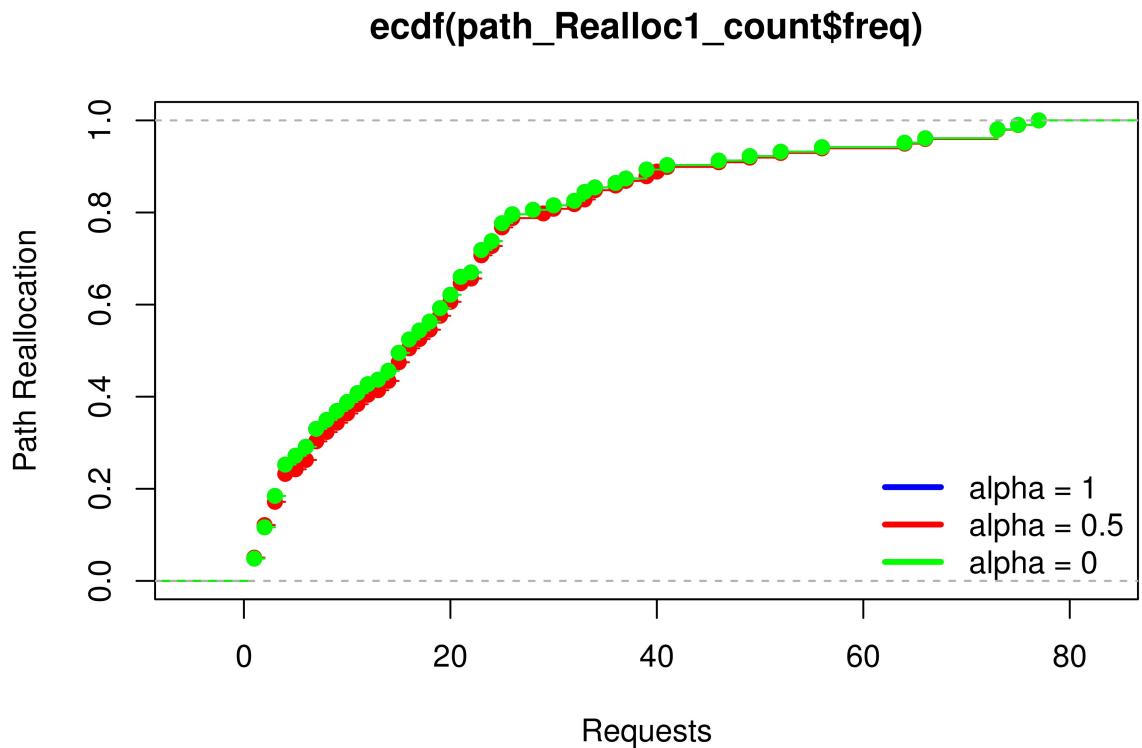
## 
## Paired t-test
##
## data: load_links_means1 and load_links_means0
## t = NaN, df = 99, p-value = NA
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## NaN NaN
## sample estimates:
## mean of the differences
## 0

## 
## Paired t-test
##
## data: load_links_means05 and load_links_means0
## t = 2.8499, df = 99, p-value = 0.005321
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## 0.3174408 1.7725592
## sample estimates:
## mean of the differences
## 1.045

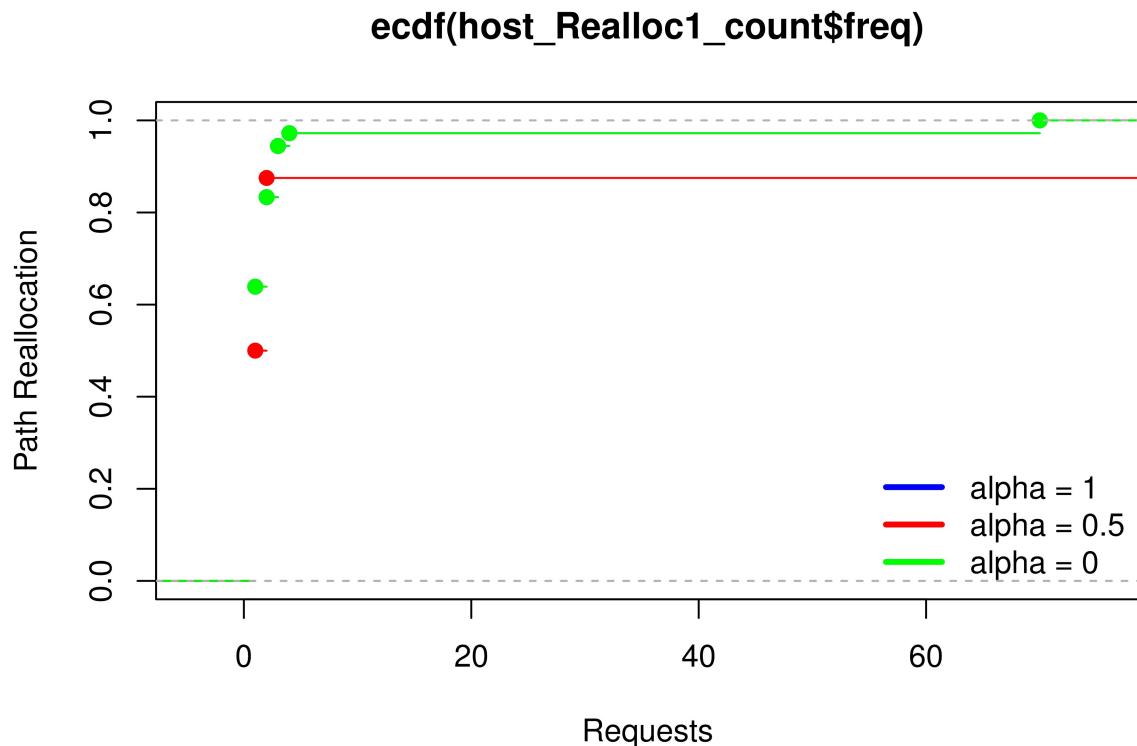
## [1] "A diferença é estatisticamente significativa."

```

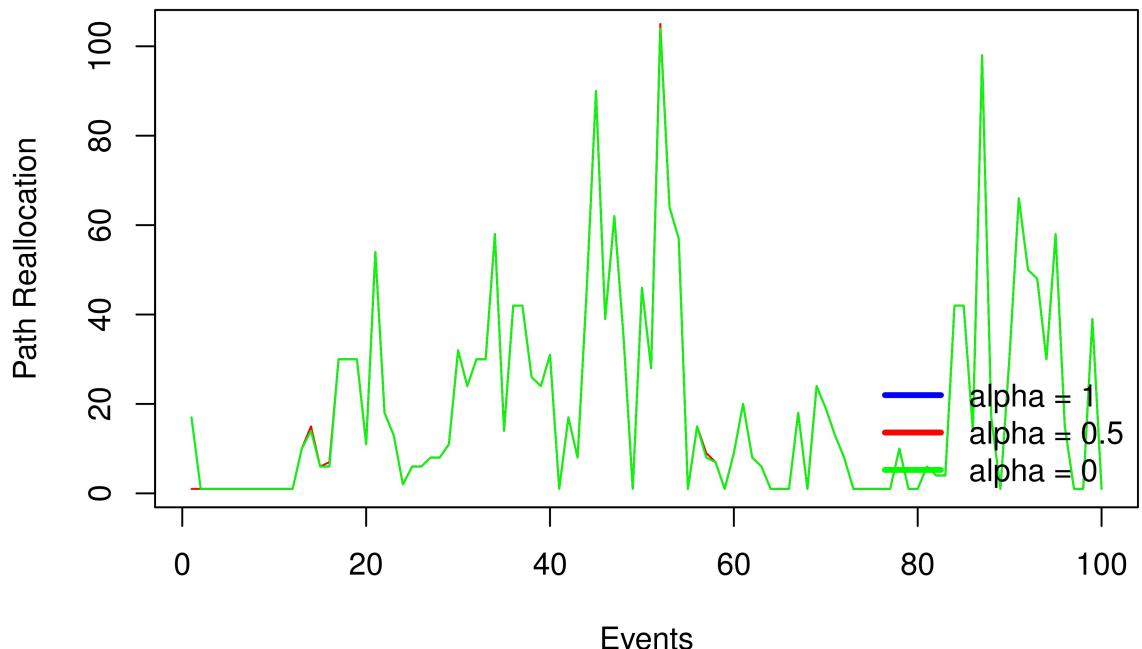
Número de Realocação de Enlaces por Requisição



Número de Realocação de Servidor por Requisição



Número de Realocação de Enlaces por Evento



```
##
## Paired t-test
##
## data: path_Realloc1_count_event$freq and path_Realloc05_count_event$freq
## t = 0.74254, df = 99, p-value = 0.4595
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.2006655 0.4406655
## sample estimates:
## mean of the differences
## 0.12

##
## Paired t-test
##
## data: path_Realloc1_count_event$freq and path_Realloc0_count_event$freq
## t = NaN, df = 99, p-value = NA
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## NaN NaN
## sample estimates:
## mean of the differences
## 0
```

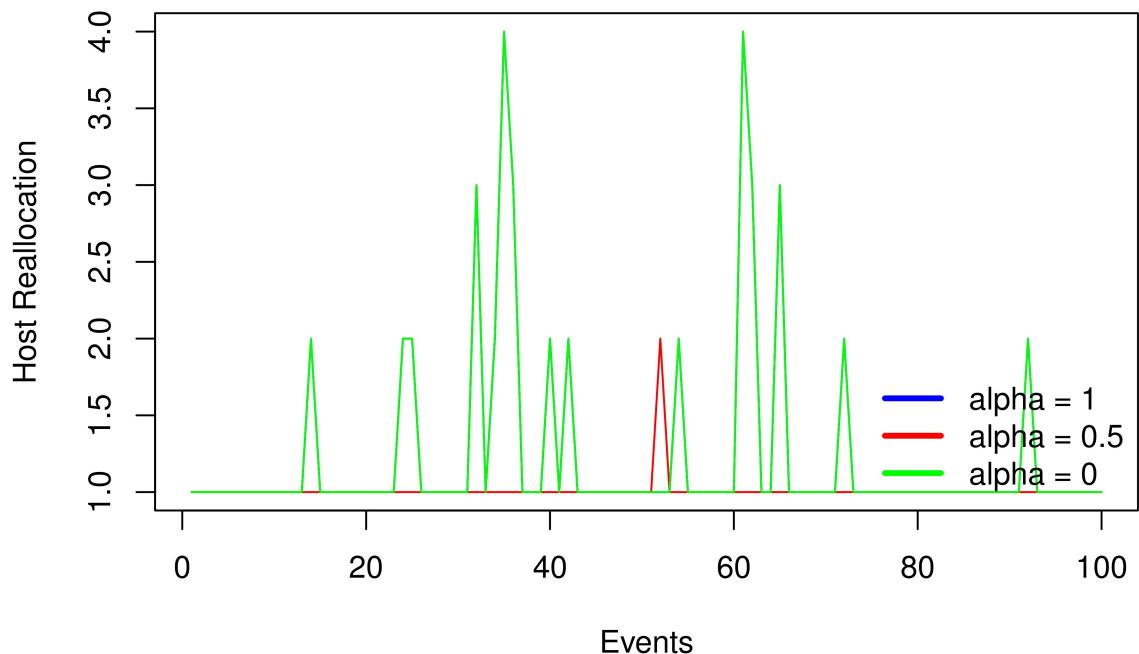
```

## Paired t-test
##
## data: path_Realloc05_count_event$freq and path_Realloc0_count_event$freq
## t = -0.74254, df = 99, p-value = 0.4595
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.4406655 0.2006655
## sample estimates:
## mean of the differences
## -0.12

## [1] "A diferença não é estatisticamente significativa."

```

Número de Realocação de Servidor por Evento



```

## Paired t-test
##
## data: host_Realloc1_count_event$freq and host_Realloc05_count_event$freq
## t = 3.498, df = 99, p-value = 0.0007038
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## 0.09520623 0.34479377
## sample estimates:

```

```

## mean of the differences
## 0.22

##
## Paired t-test
##
## data: host_Realloc1_count_event$freq and host_Realloc0_count_event$freq
## t = NaN, df = 99, p-value = NA
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##   NaN NaN
## sample estimates:
## mean of the differences
## 0

##
## Paired t-test
##
## data: host_Realloc05_count_event$freq and host_Realloc0_count_event$freq
## t = -3.498, df = 99, p-value = 0.0007038
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.34479377 -0.09520623
## sample estimates:
## mean of the differences
## -0.22

## [1] "A diferença é estatisticamente significativa."

```

Testes de Correlação

```

## [1] "Correlação entre migração de servidores e caminhos."
## [1] 0.1259322

## [1] "Correlação entre carga média dos enlaces e migração de caminhos."
## [1] 0.009146031

## [1] "Correlação entre carga média dos enlaces e migração de servidores"
## [1] -0.01177159

```