Storage

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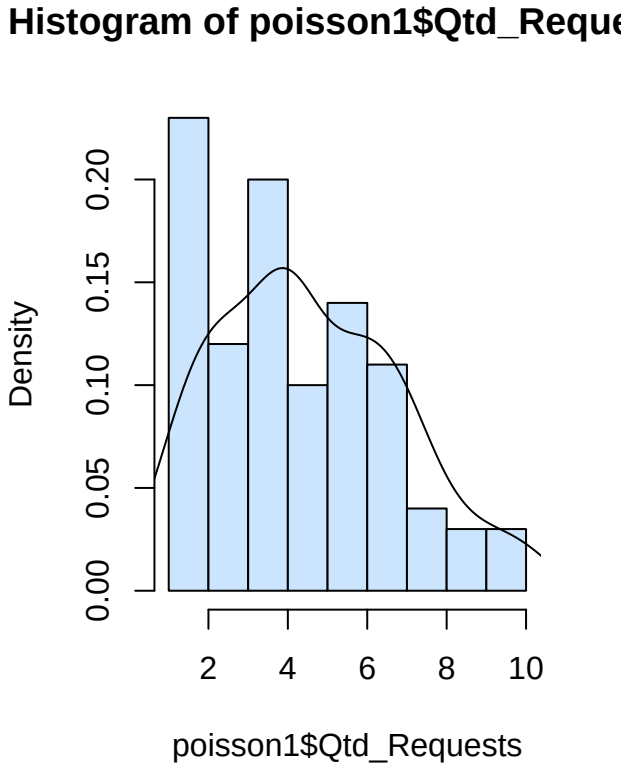
Parâmetros

Parâmetros	Valores
alfa zipf	0.8
lambda	5
n	100
beta	0.2
BS	32
Cache	100
UE	200
Storage	MBS: 10/20/30/40/50/60GB - SBS: 4/6/8/10/12GB
Coverage	MBS 300 SBS 70
RTT inicial	CS/MBS 0.001s(1ms) MBS/MBS 0.001s(1ms) MBS/SBS 0.001s(1ms) SBS/UE 0.001s(1ms)
Tempo da Requisição	10 eventos
Mobilidade	40m

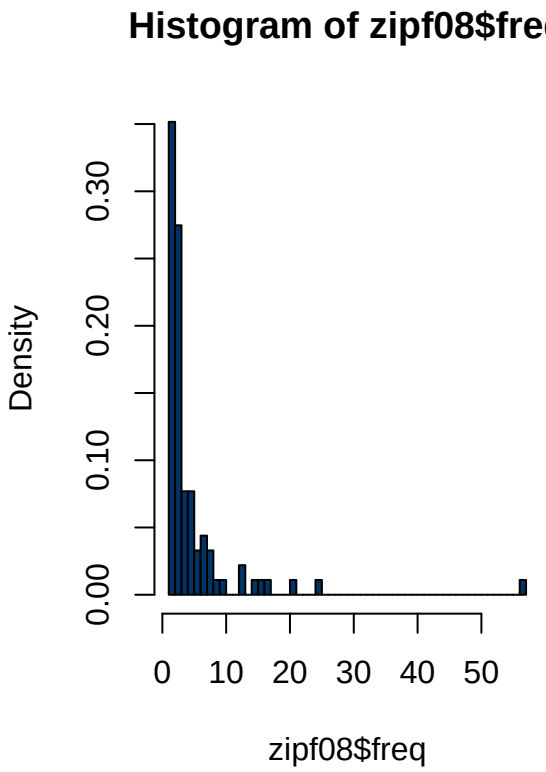
Informações da Aplicação.

Vazão Mínima	Tamanho da Cache	Buffer
100 Mbps	2GB/2000MB	48Mb
100 Mbps	4GB/4000MB	48Mb
100 Mbps	8GB/8000MB	48Mb

Distribuição das Requisições.



Distribuição de popularidade do conteúdo solicitado.



Taxa de requisições alocadas.

$\alpha : 0.2 = 100\%$ - $454/454$.

$\alpha : 0.4 = 100\%$ - $454/454$.

$\alpha : 0.6 = 100\%$ - $454/454$.

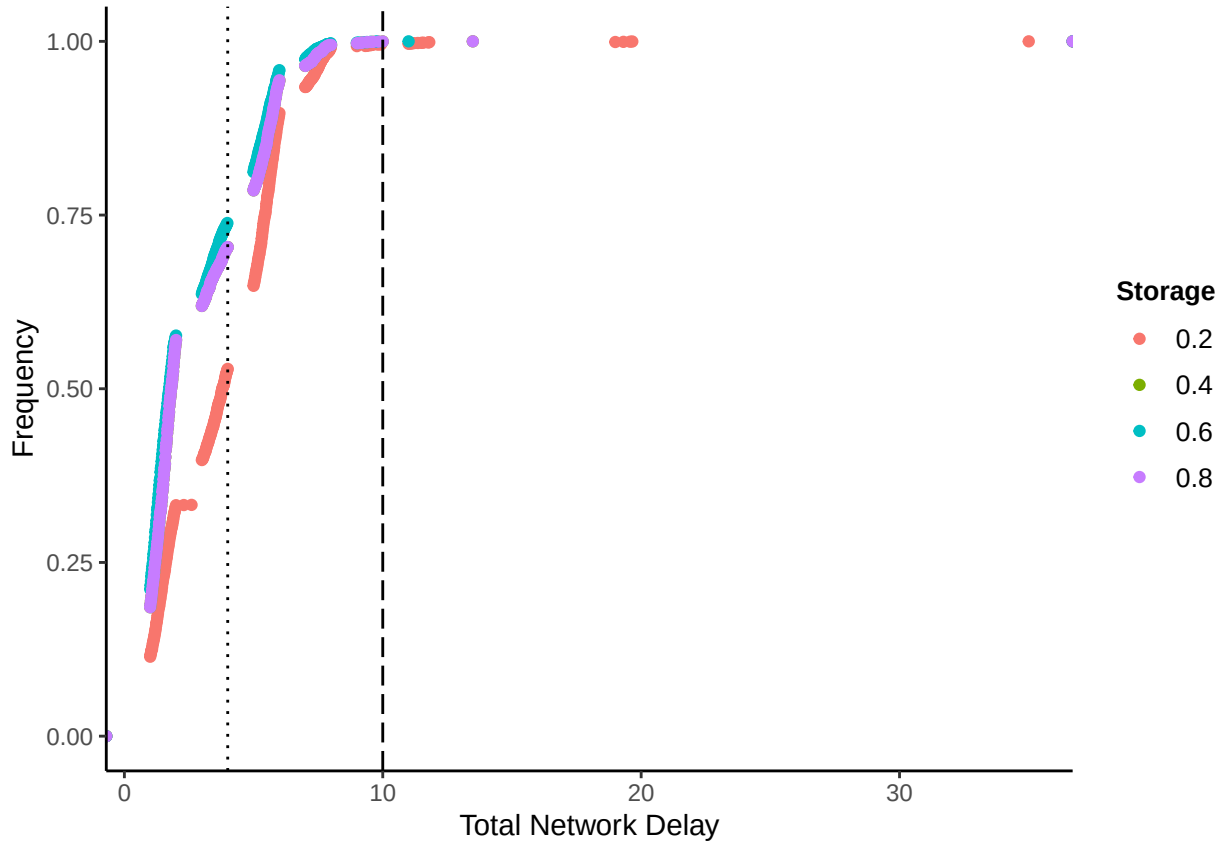
$\alpha : 0.8 = 100\%$ - $454/454$.

$\alpha : 1.0 = 100\%$ - $454/454$.

$\alpha : 1.2 = 100\%$ - $454/454$.

Distribuição da Latência

```
## Saving 6.5 x 4.5 in image
## Saving 6.5 x 4.5 in image
```



Storage: 0.2

Em 52.74% da amostra a latência das requisições são menores que 4 milisegundos.

Em 99.55% da amostra a latência das requisições são menores que 10 milisegundos.

Storage: 0.4

Em 70.32% da amostra a latência das requisições são menores que 4 milisegundos.

Em 99.95% da amostra a latência das requisições são menores que 10 milisegundos.

Storage: 0.6

Em 73.86% da amostra a latência das requisições são menores que 4 milisegundos.

Em 99.98% da amostra a latência das requisições são menores que 10 milisegundos.

Storage: 0.8

Em 70.32% da amostra a latência das requisições são menores que 4 milisegundos.

Em 99.95% da amostra a latência das requisições são menores que 10 milisegundos.

Storage: 1.0

Em 73.86% da amostra a latência das requisições são menores que 4 milisegundos.

Em 99.98% da amostra a latência das requisições são menores que 10 milisegundos.

Storage: 1.2

Em 70.32% da amostra a latência das requisições são menores que 4 milisegundos.

Em 99.95% da amostra a latência das requisições são menores que 10 milisegundos.

Cache, Cloud e Storage.

```
## Saving 6.5 x 4.5 in image
## Saving 6.5 x 4.5 in image
## Saving 6.5 x 4.5 in image
## Saving 6.5 x 4.5 in image
## Saving 6.5 x 4.5 in image
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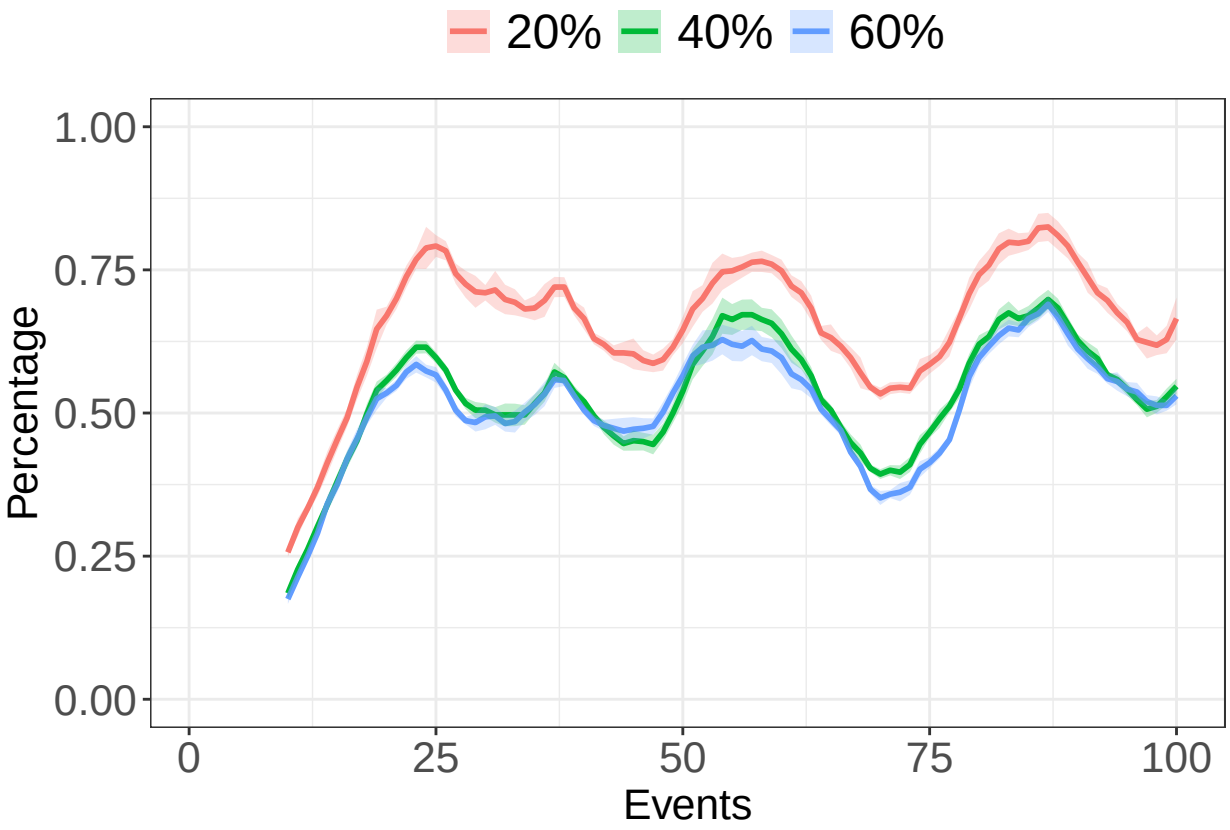
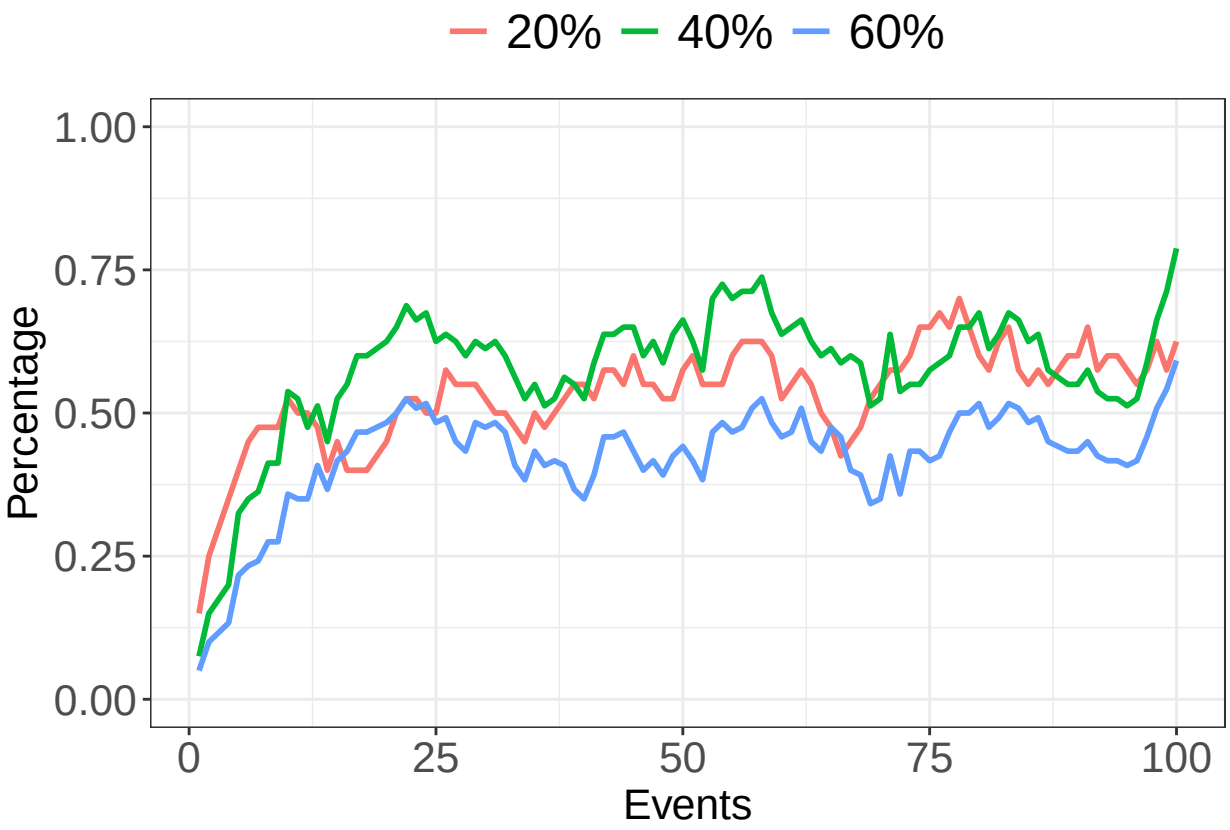
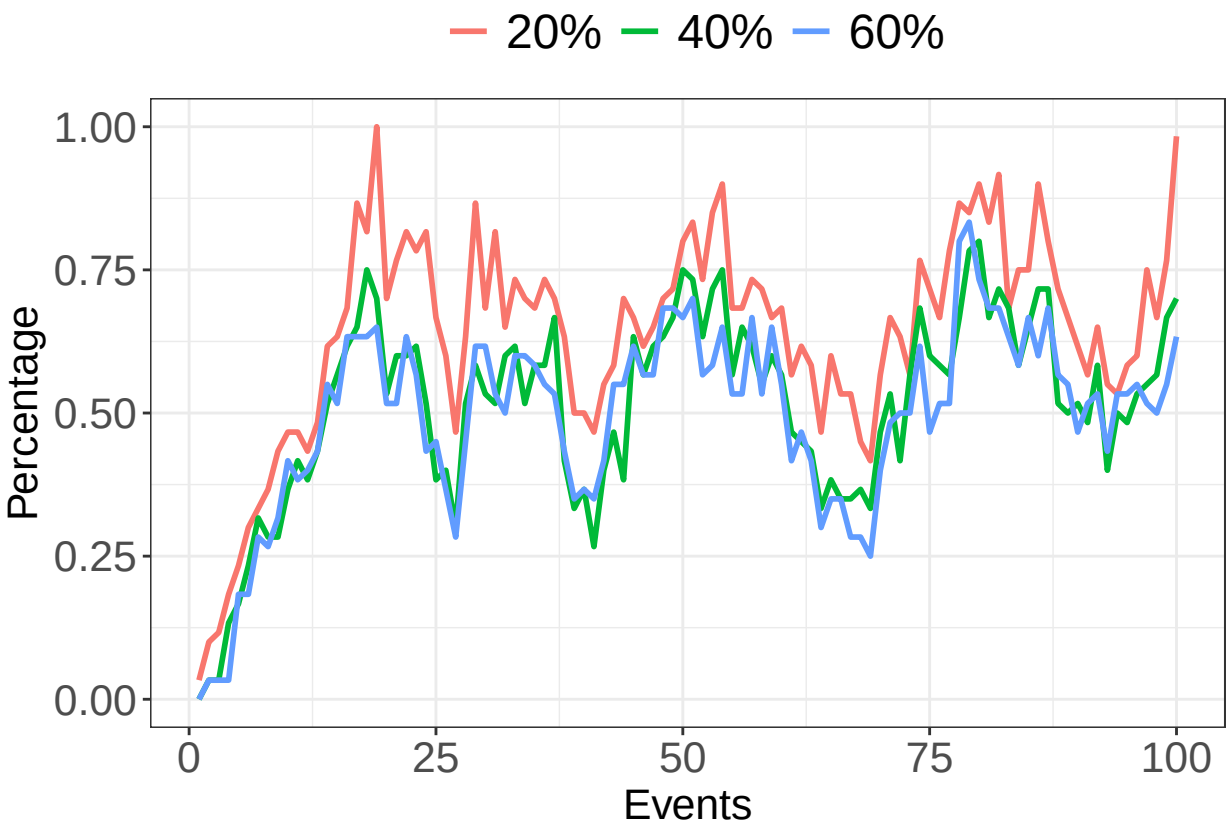
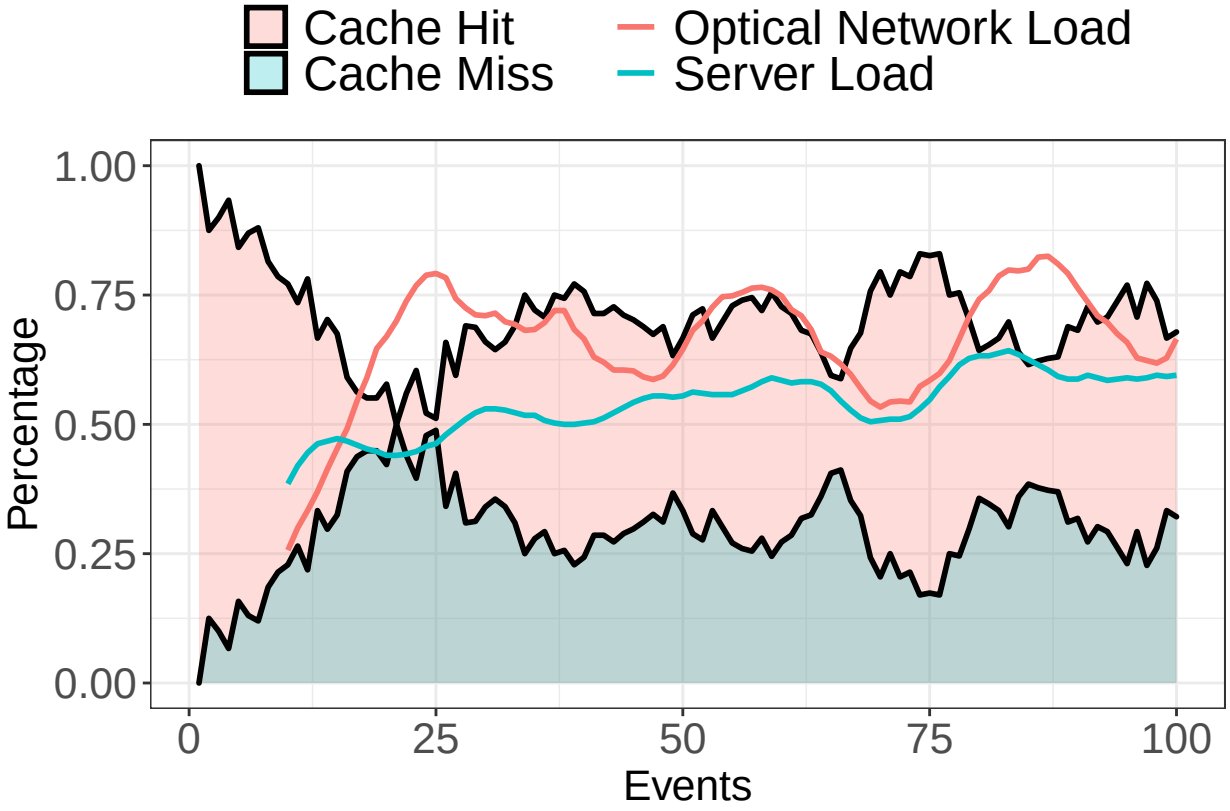
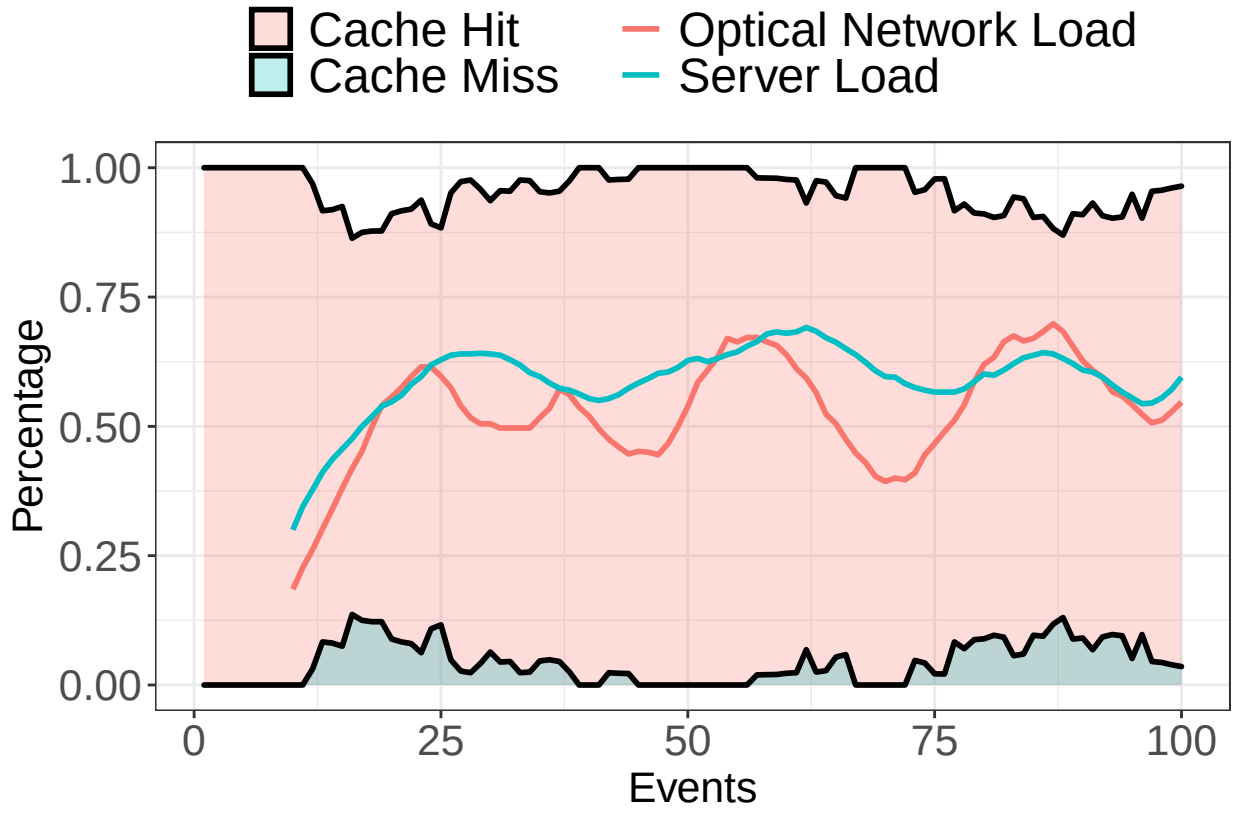
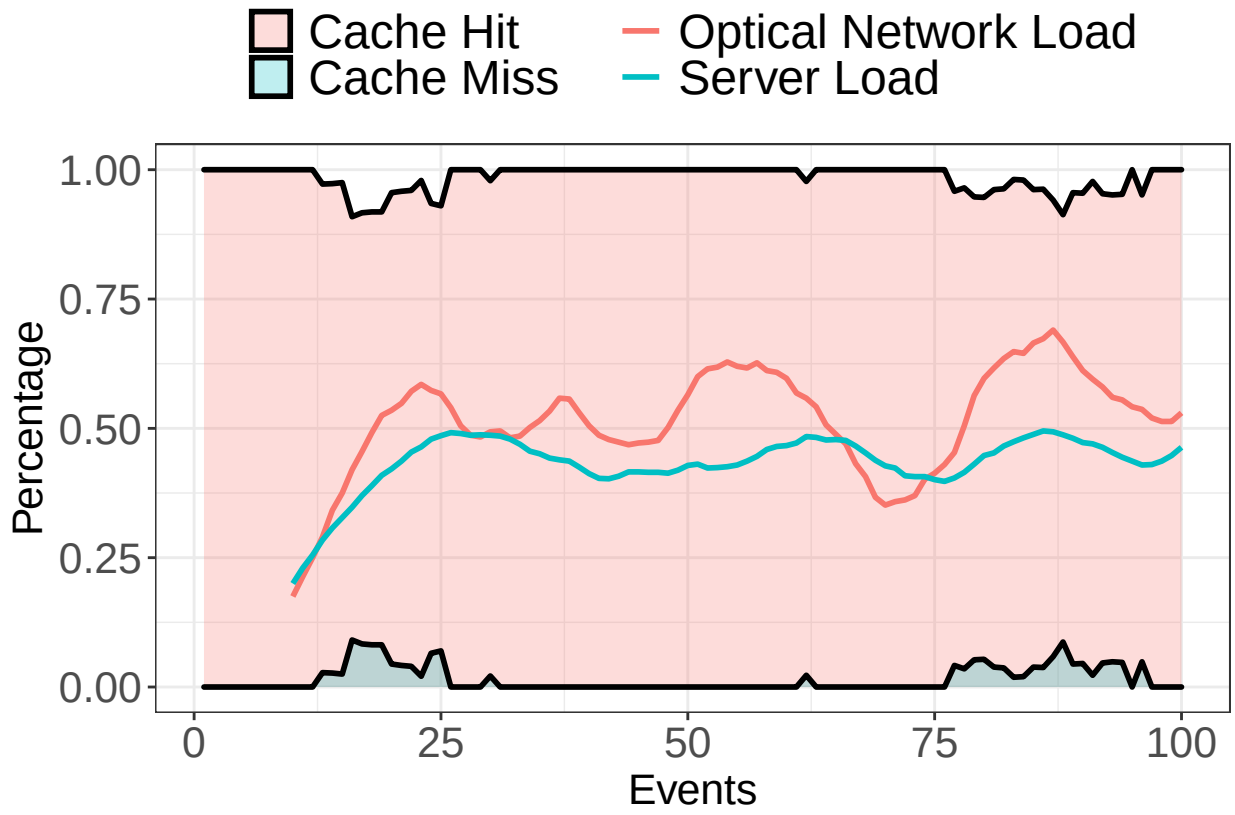

20%
40%
60%
1.00
0.75
0.50
0.25
0.00
Percentage
0
25
50
75
100
Events


20%
40%
60%
1.00
0.75
0.50
0.25
0.00
Percentage
0
25
50
75
100
Events


20%
40%
60%
1.00
0.75
0.50
0.25
0.00
Percentage
0
25
50
75
100
Events


Cache Hit
Cache Miss
Optical Network Load
Server Load
1.00
0.75
0.50
0.25
0.00
Percentage
0
25
50
75
100
Events


Cache Hit
Cache Miss
Optical Network Load
Server Load
1.00
0.75
0.50
0.25
0.00
Percentage
0
25
50
75
100
Events



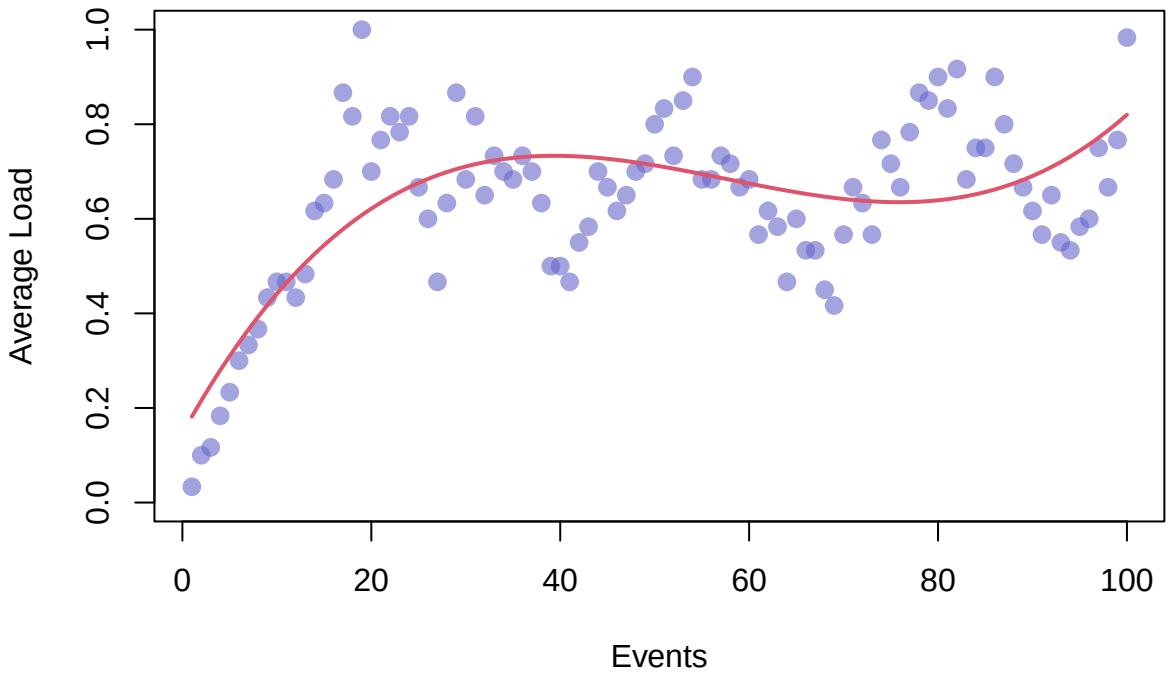
Correlação entre as medianas da latência e variação do storage.

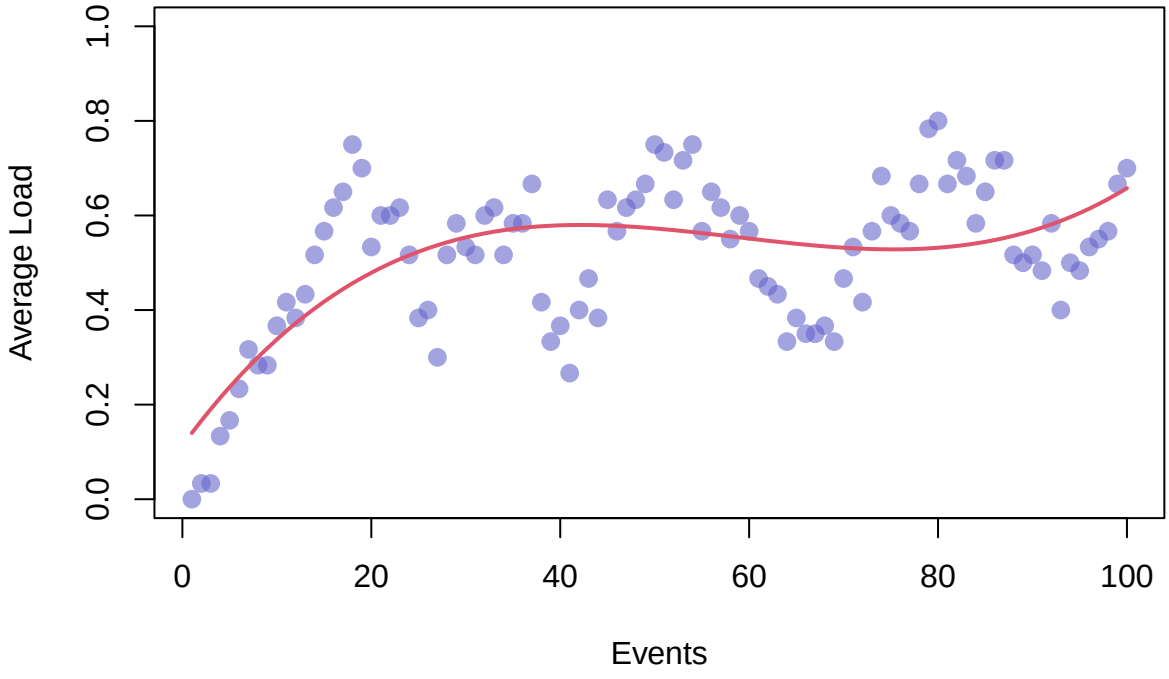
```
## [1] -0.6448976
```

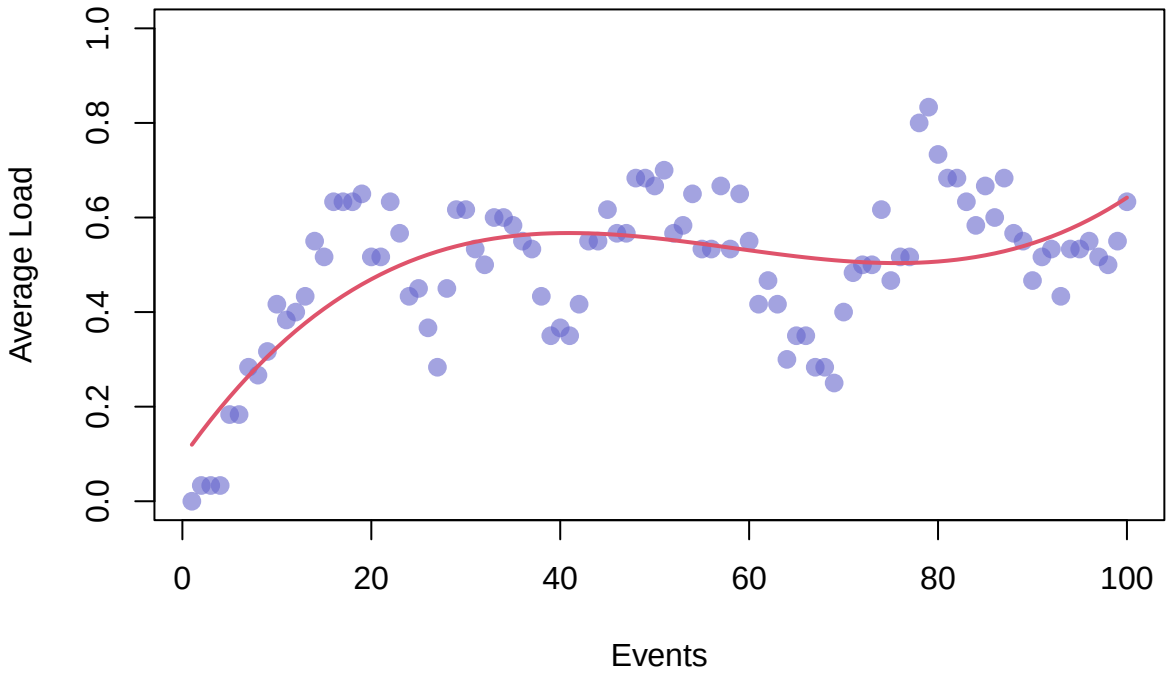
Correlação entre taxas aceitação e variação do storage.

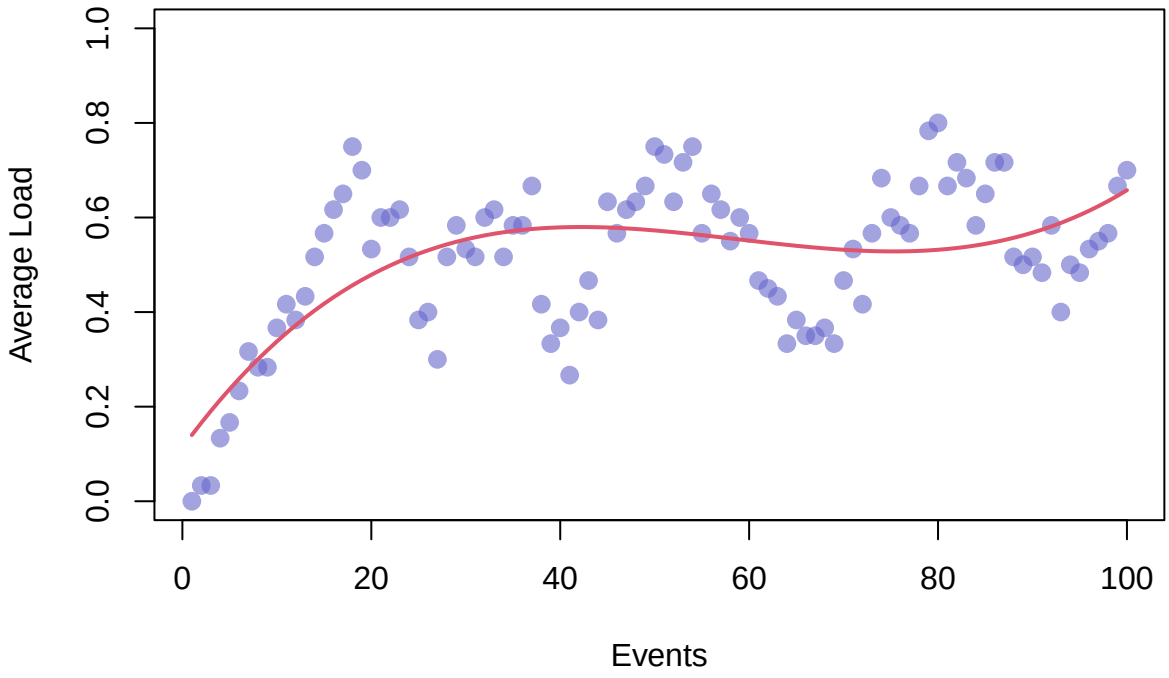
```
## [1] NA
```

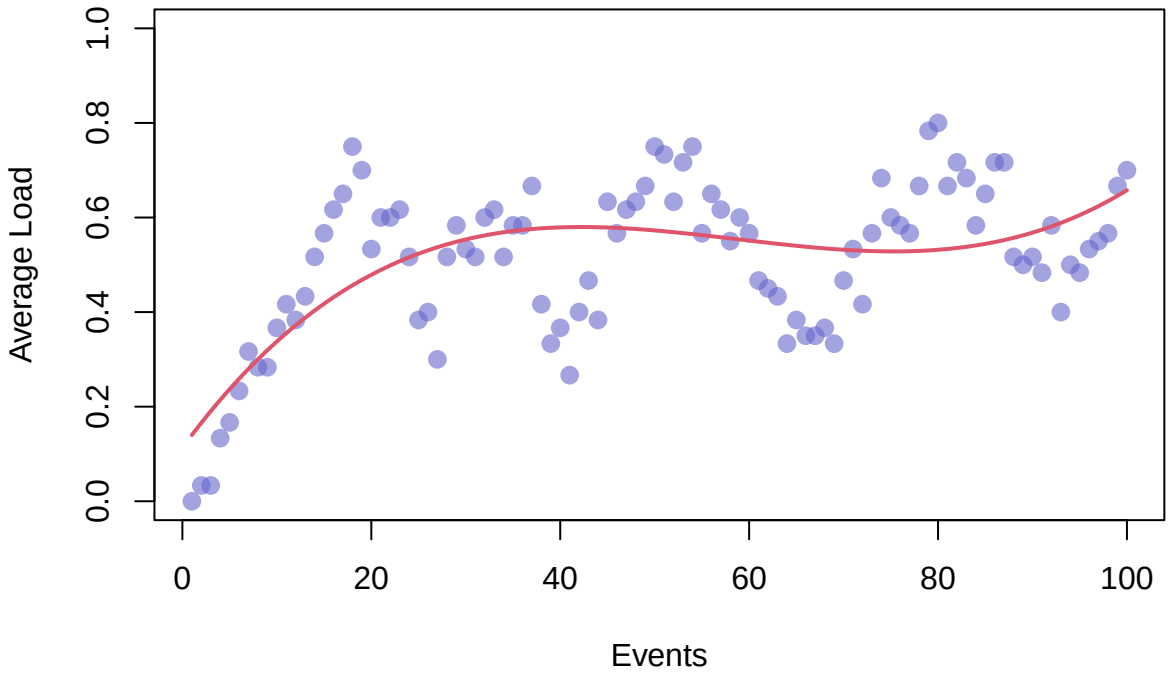
Somatório da Carga dos enlaces ópticos por evento(normalizado pelo maior somatório).

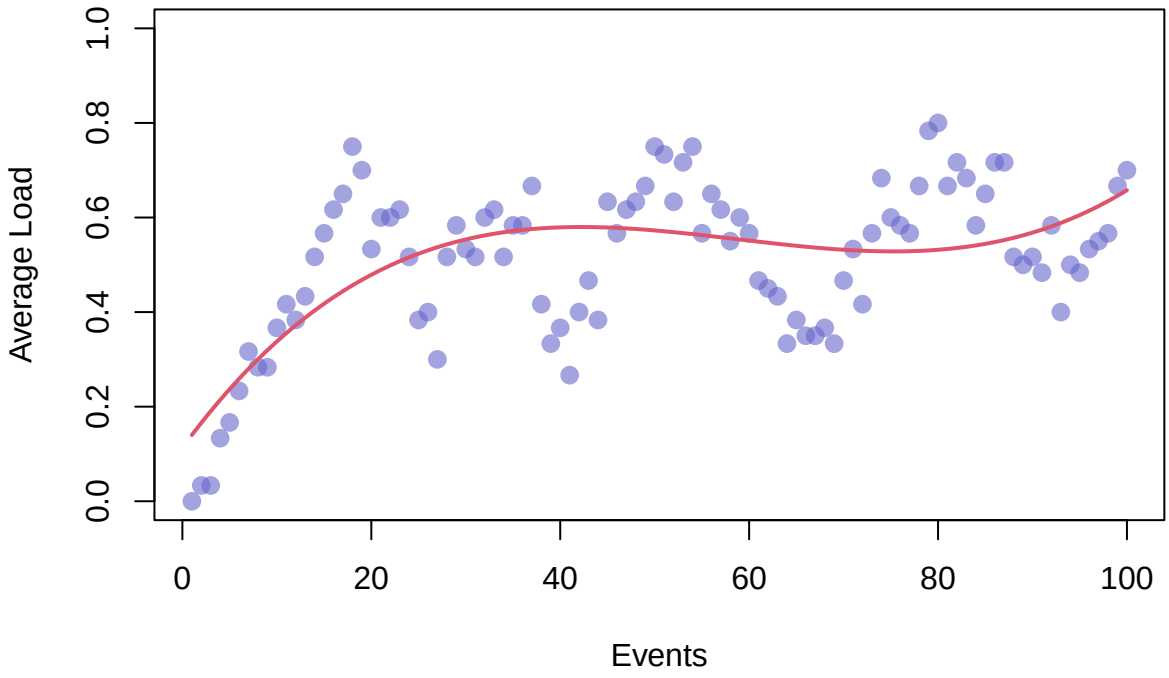





Average Load
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
Events


Average Load
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
Events


Average Load
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
Events


Average Load
0.0
0.2
0.4
0.6
0.8
1.0
0
20
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60
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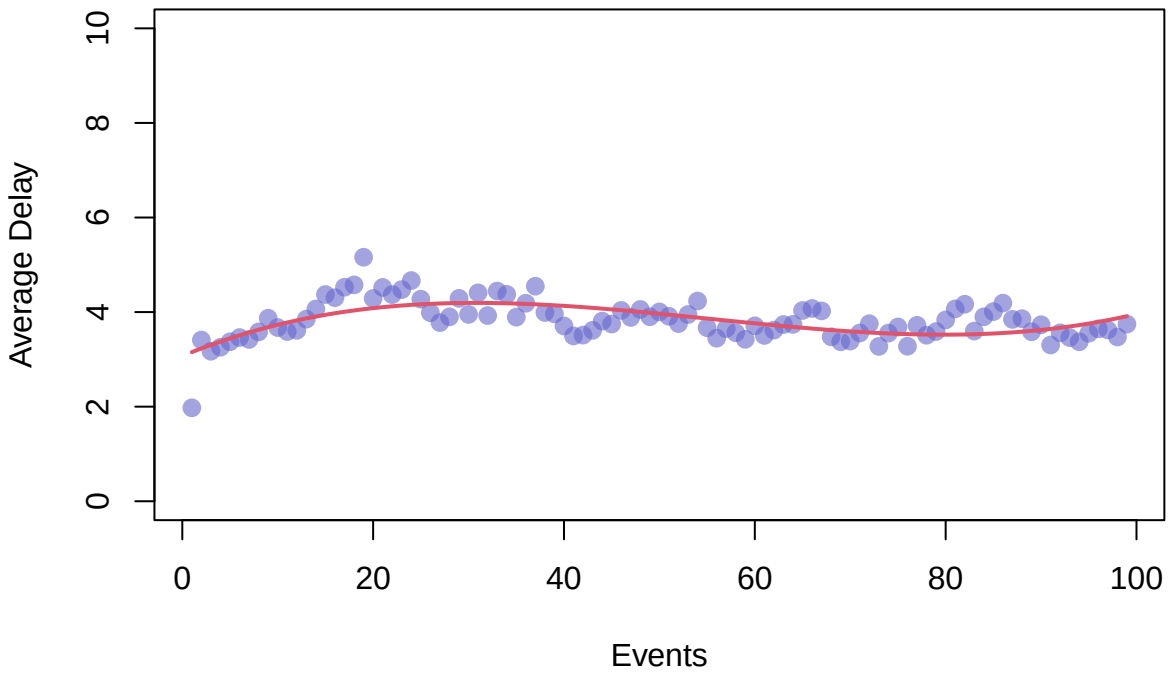
100
Events


Average Delay
0
2
4
6
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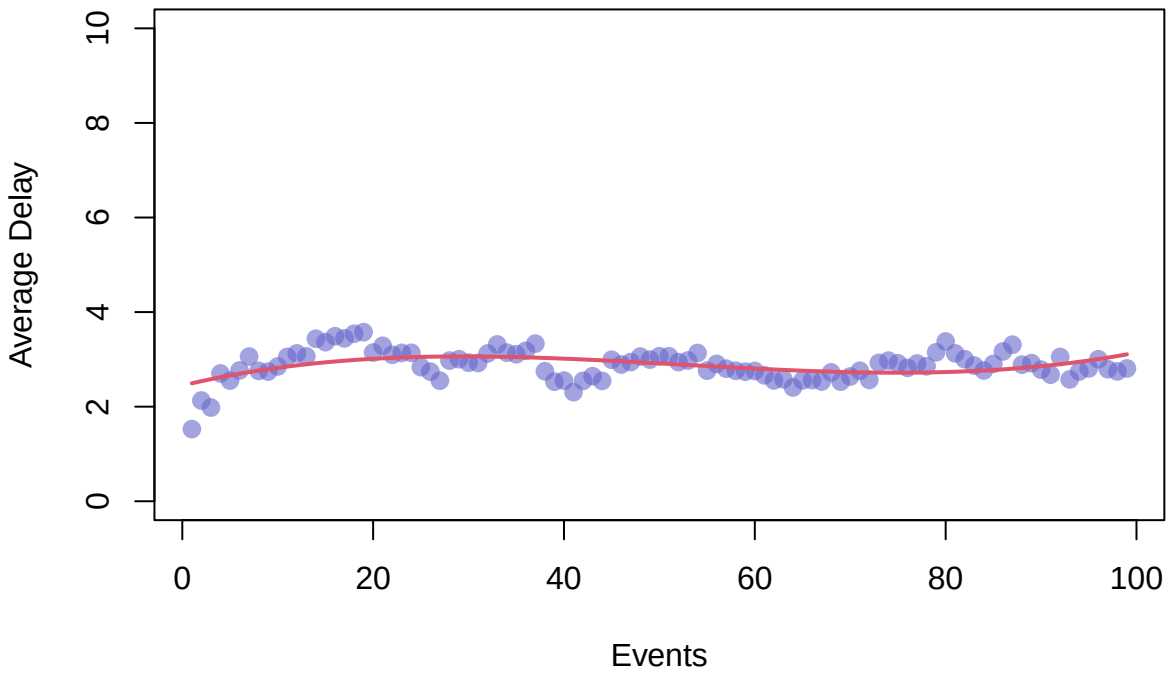
0
20
40
60
80
100
Events


Average Delay
0
2
4
6
8
10
0
20
40
60
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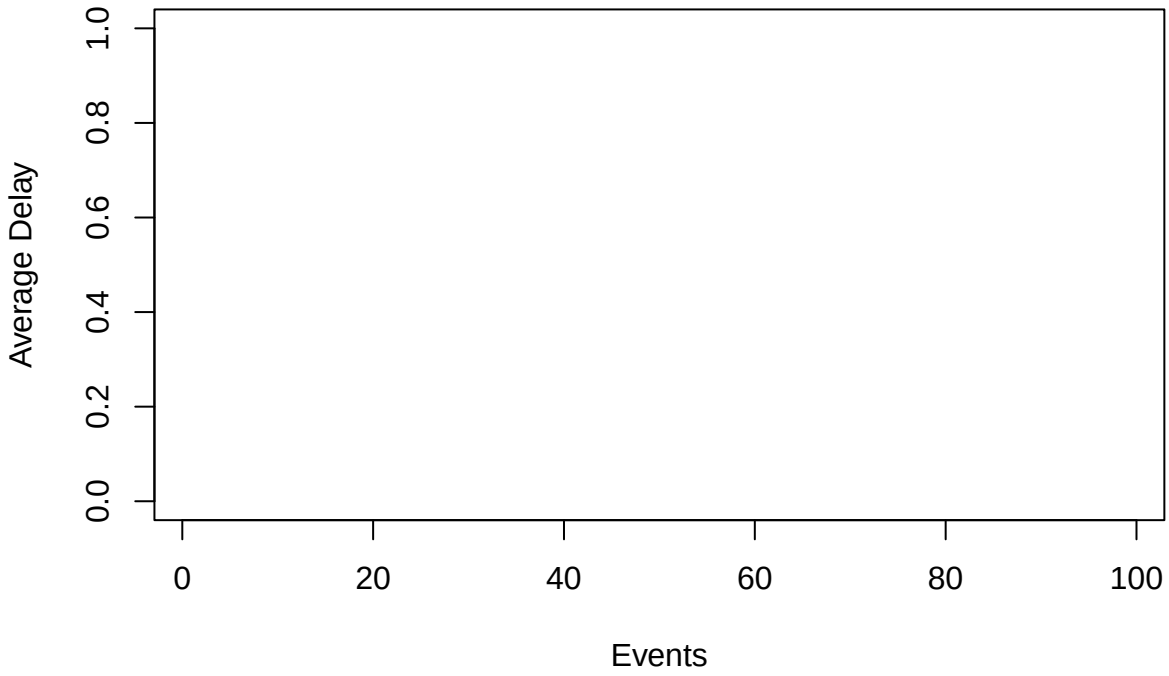
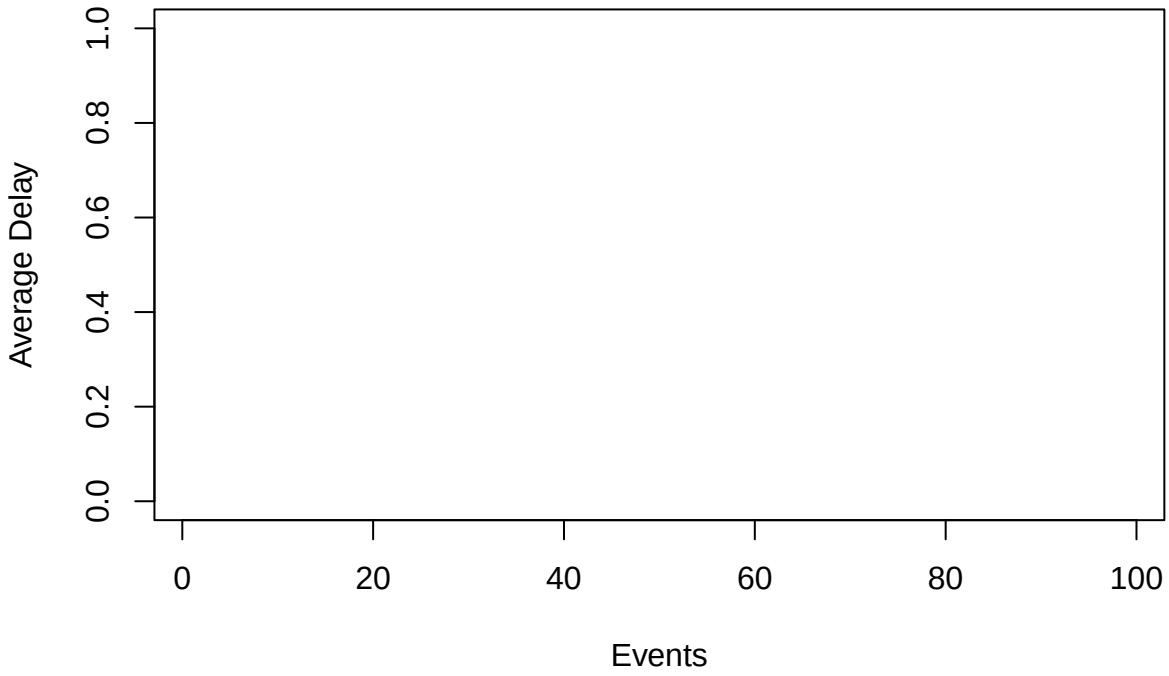
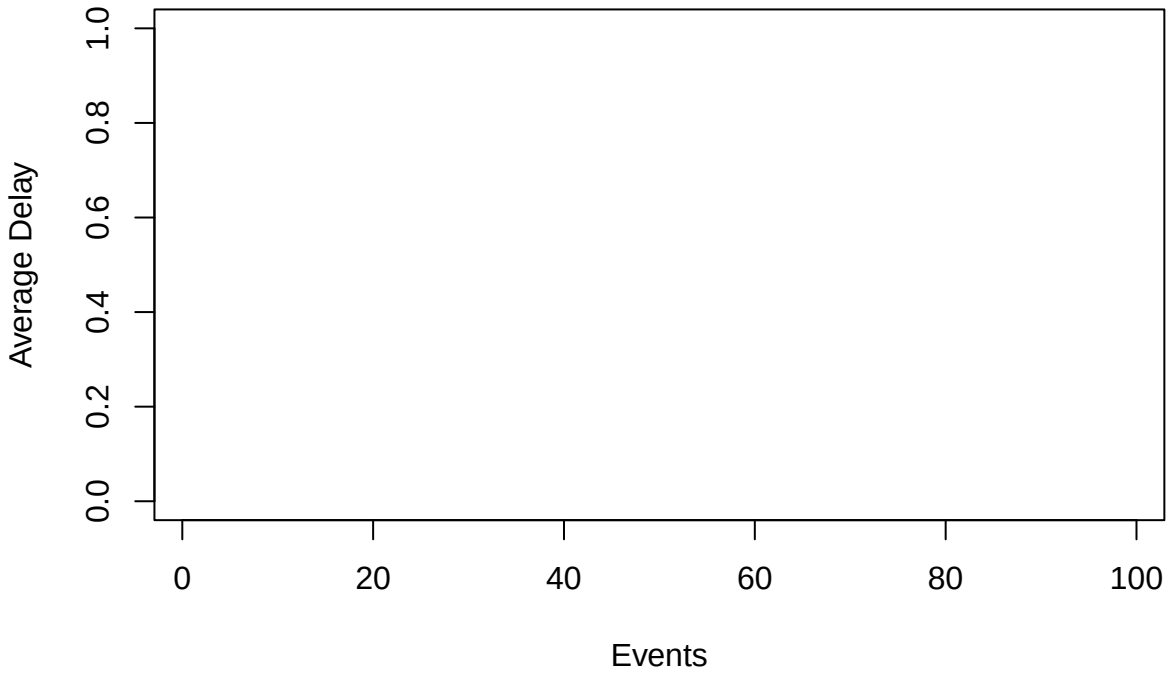
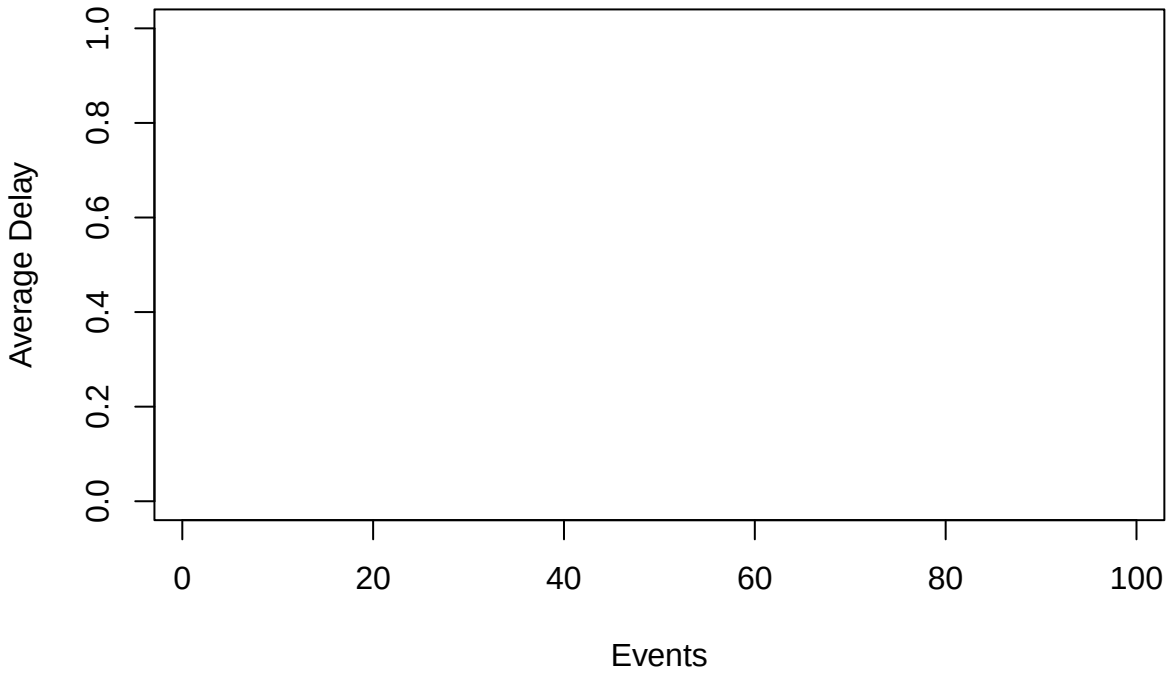
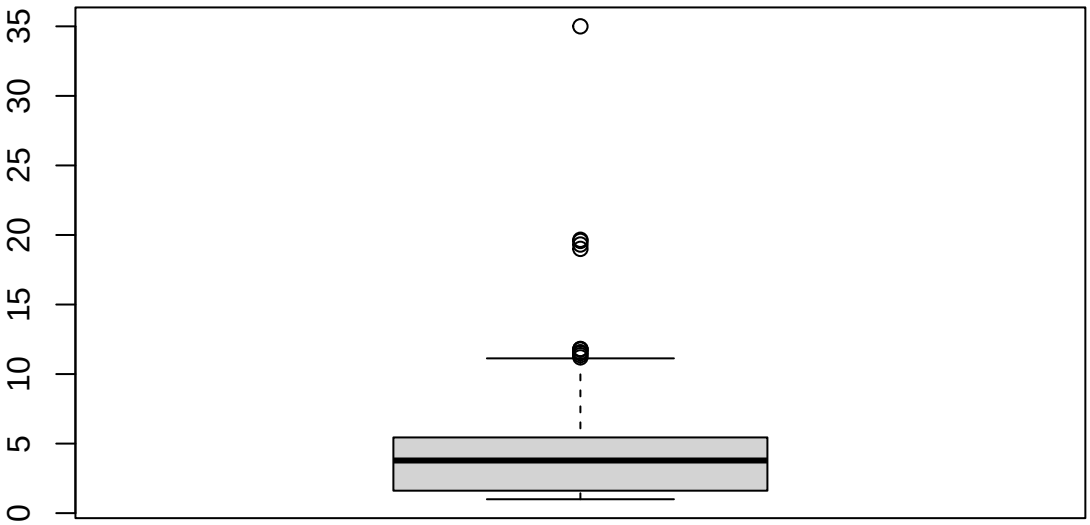
100
Events

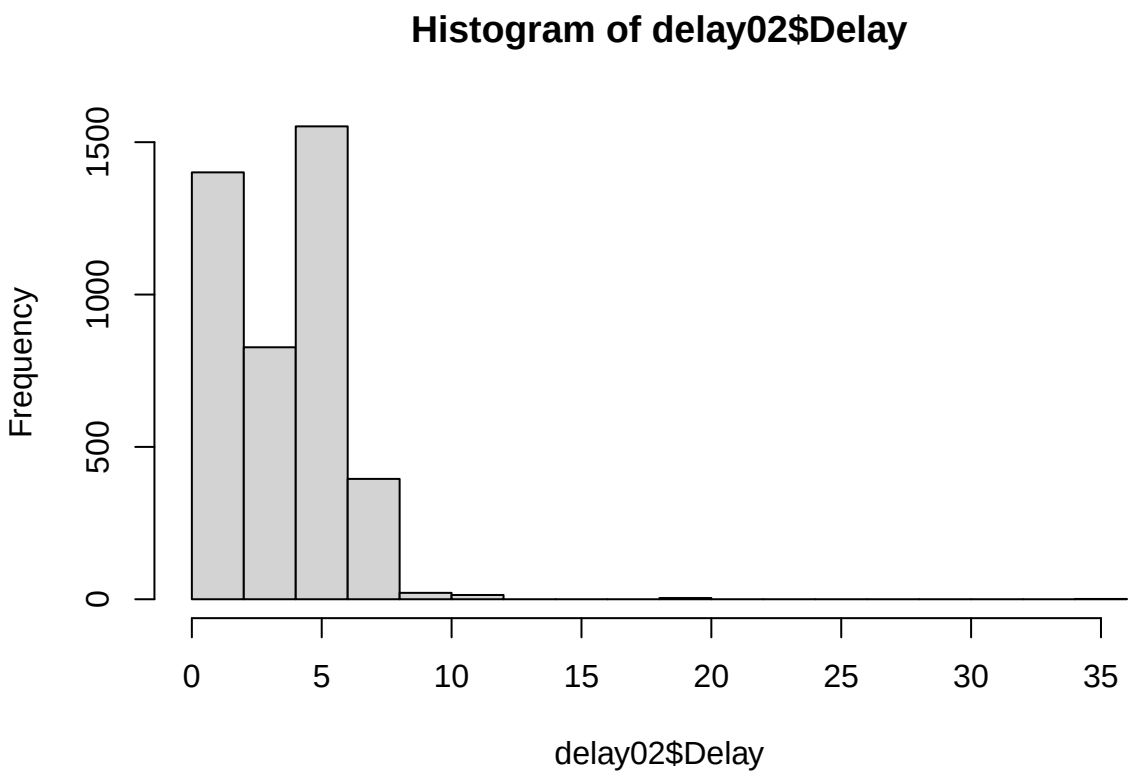

Average Delay
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
Events

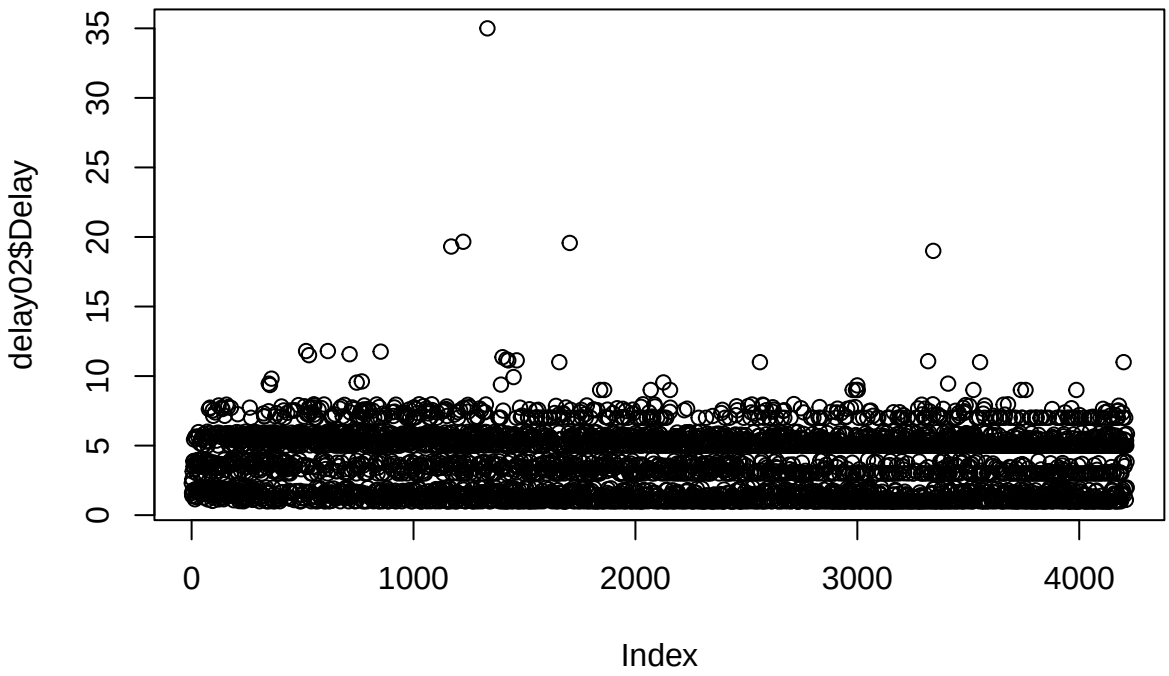

Average Delay
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
Events

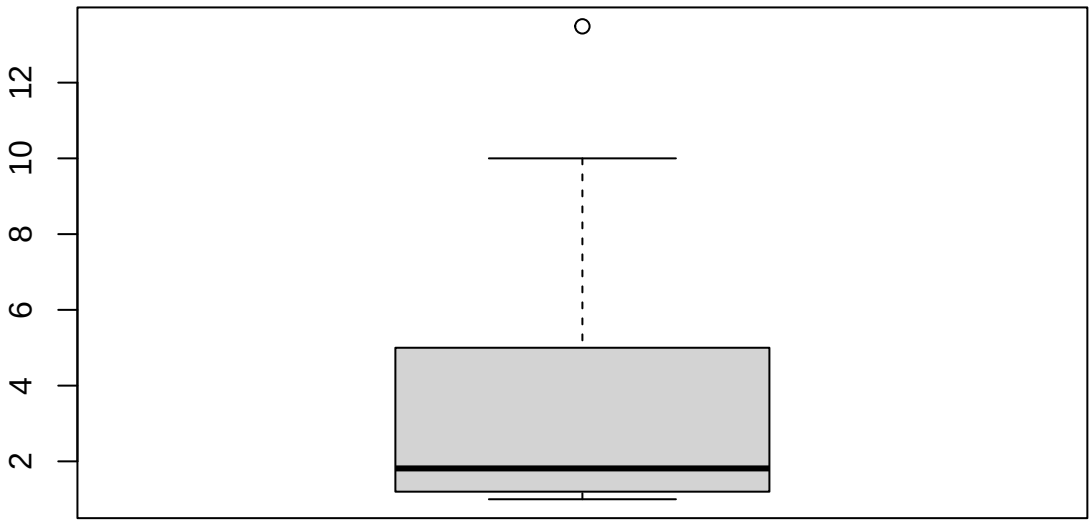

Average Delay
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
Events


Average Delay
0.0
0.2
0.4
0.6
0.8
1.0
0
20
40
60
80
100
Events


0
5
10
15
20
25
30
35


Histogram of delay02$Delay
Frequency
0
500
1000
1500
0
5
10
15
20
25
30
35
delay02$Delay


delay02$Delay
0
5
10
15
20
25
30
35
0
1000
2000
3000
4000
Index


2
4
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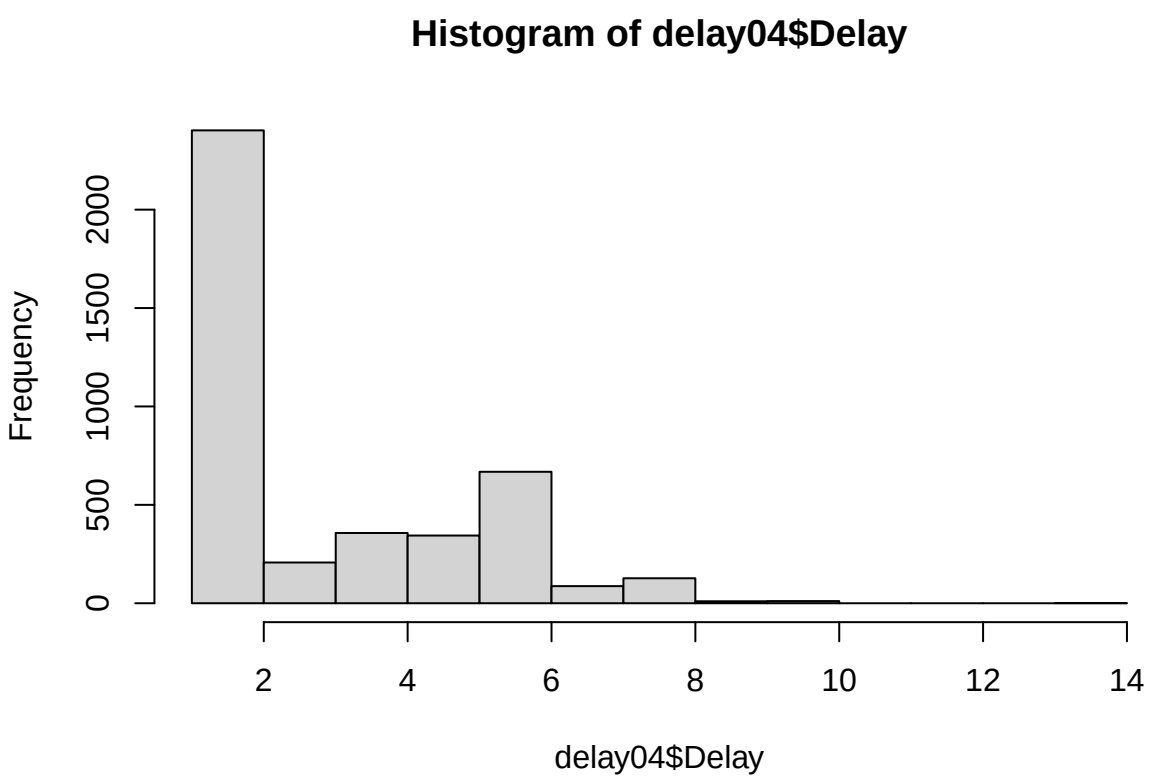
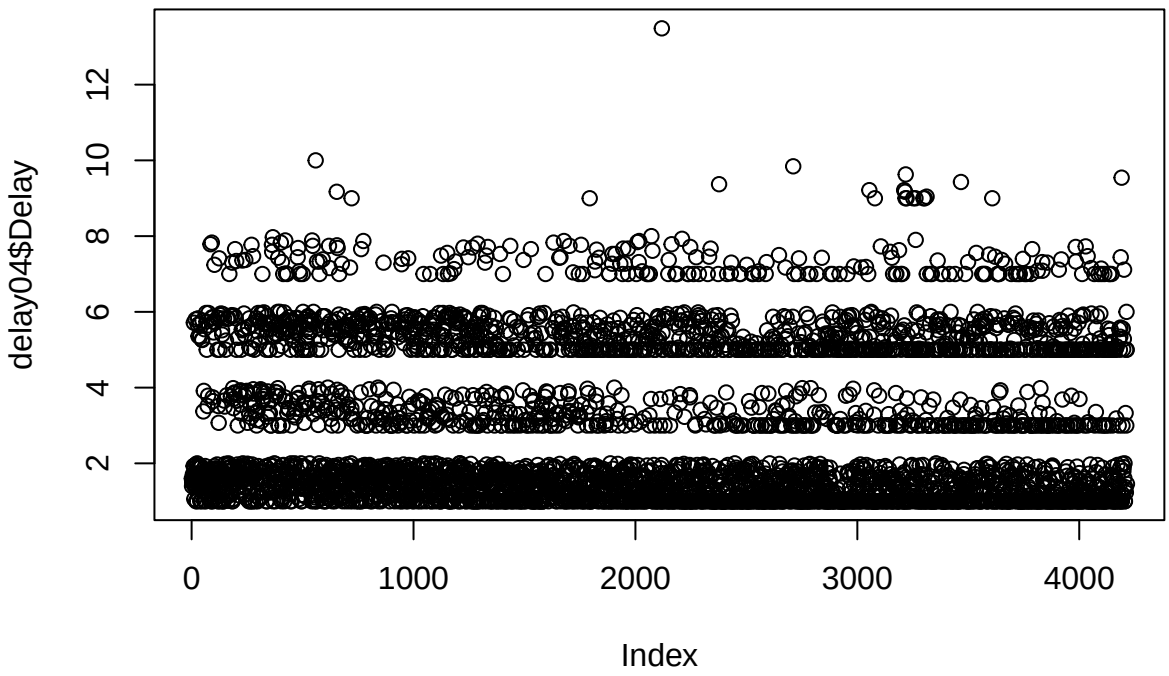
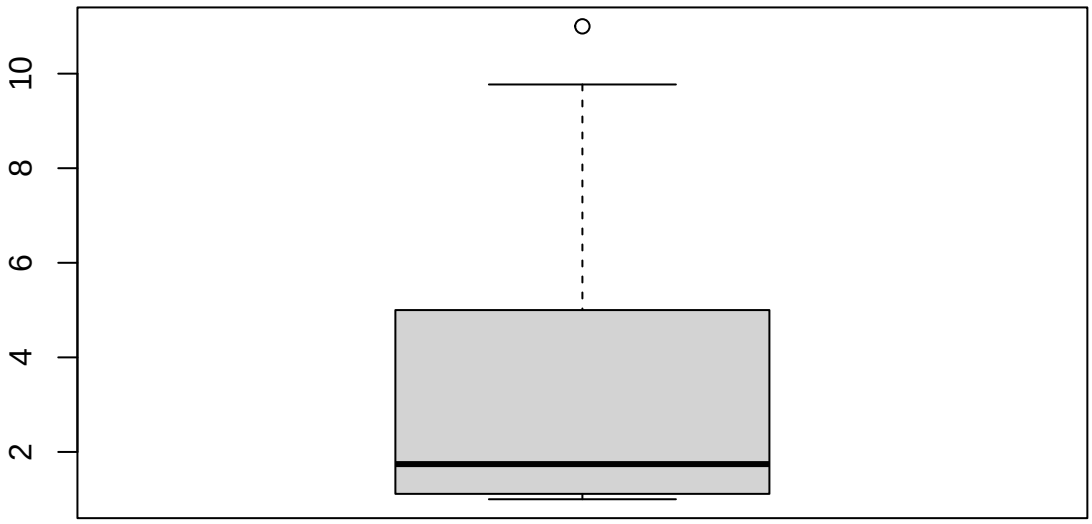
8
10
12


Histogram of delay04$Delay
Frequency
0
500
1000
1500
2000
2
4
6
8
10
12
14
delay04$Delay


delay04$Delay
2
4
6
8
10
12
0
1000
2000
3000
4000
Index


2
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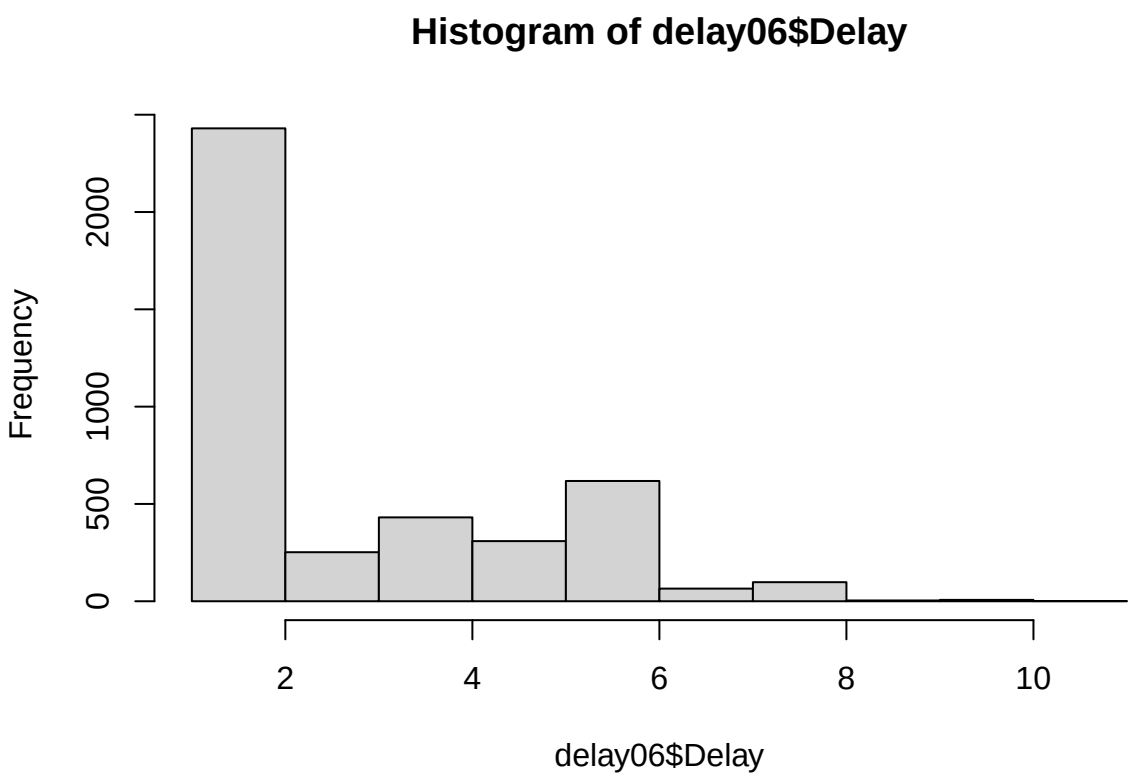
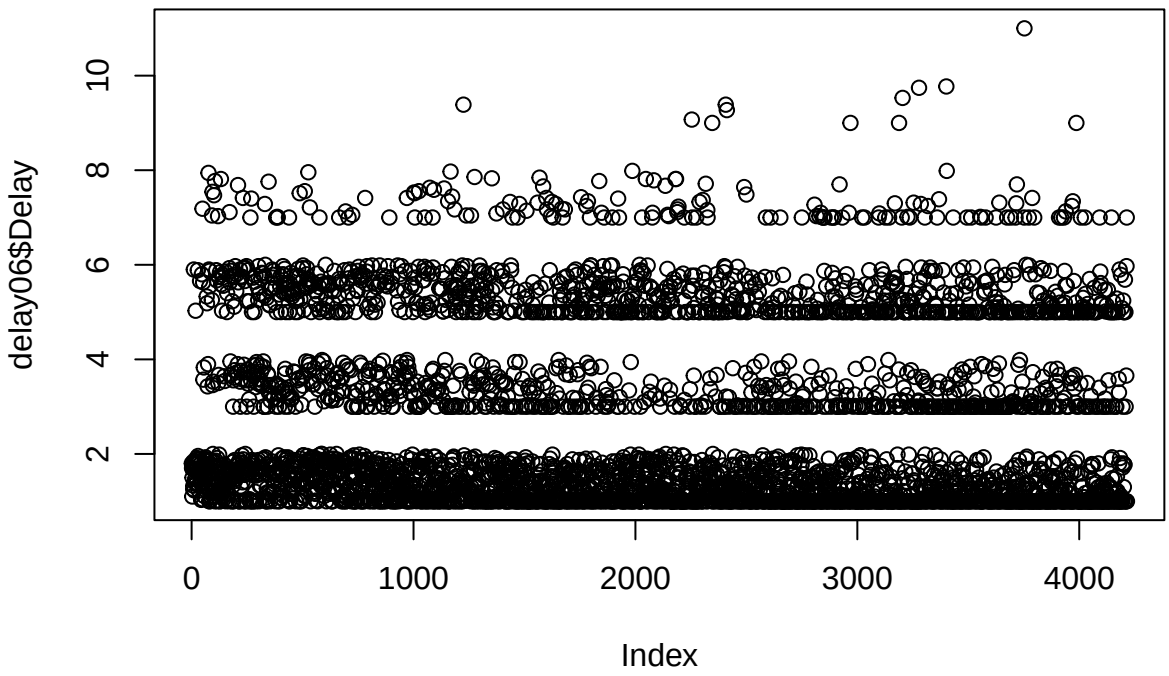
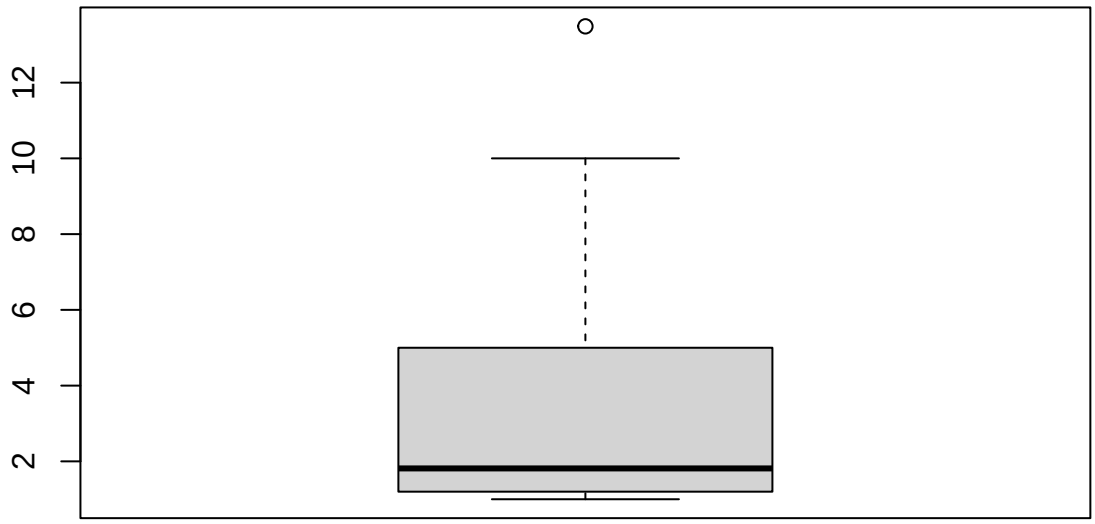
10


Histogram of delay06$Delay
Frequency
0
500
1000
2000
2
4
6
8
10
delay06$Delay


delay06$Delay
2
4
6
8
10
0
1000
2000
3000
4000
Index


2
4
6
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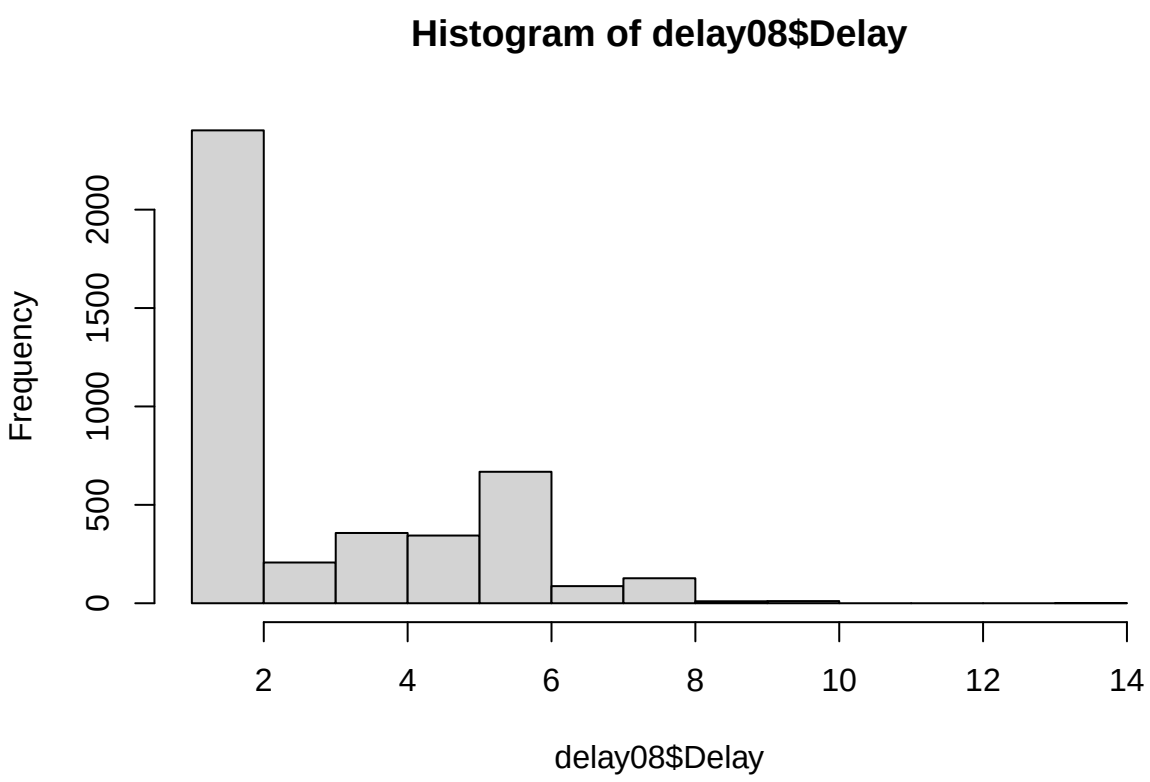
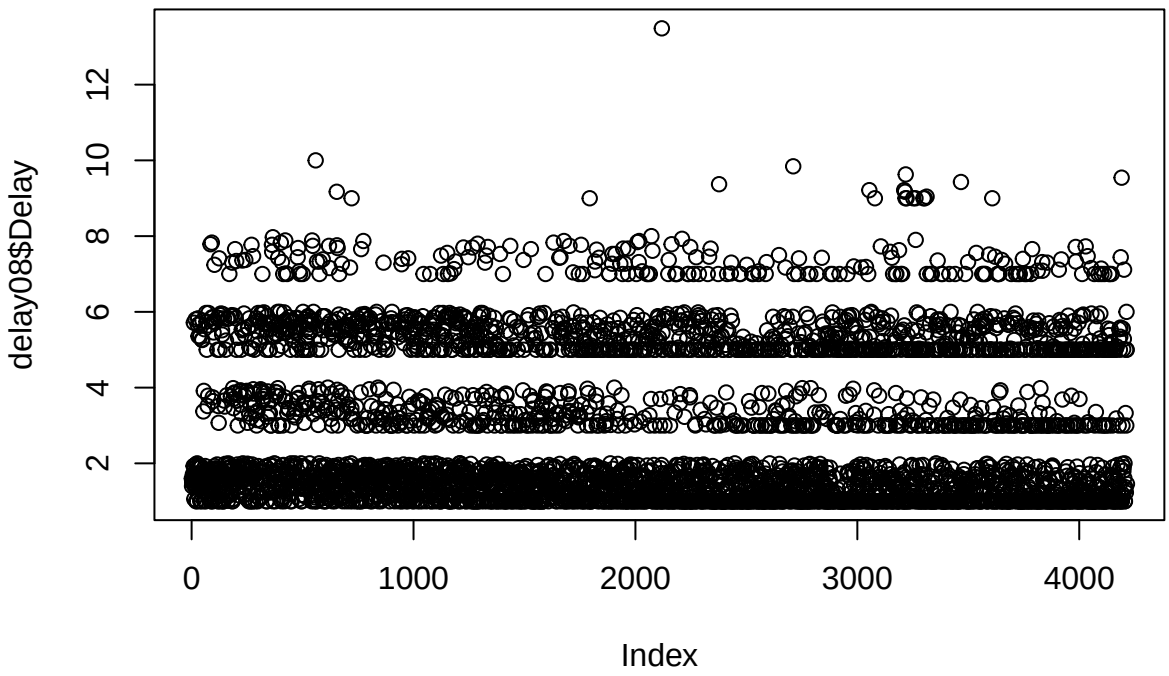
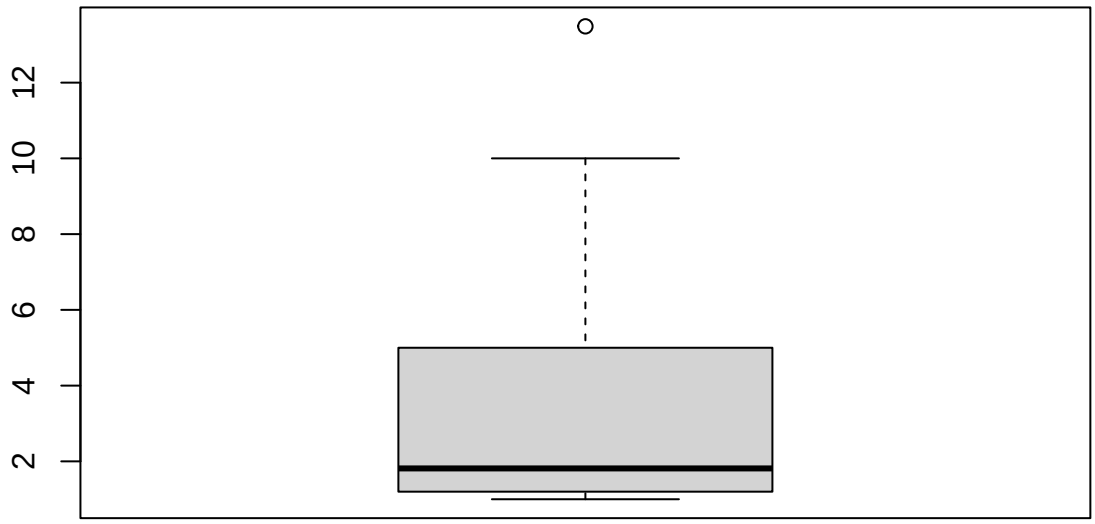
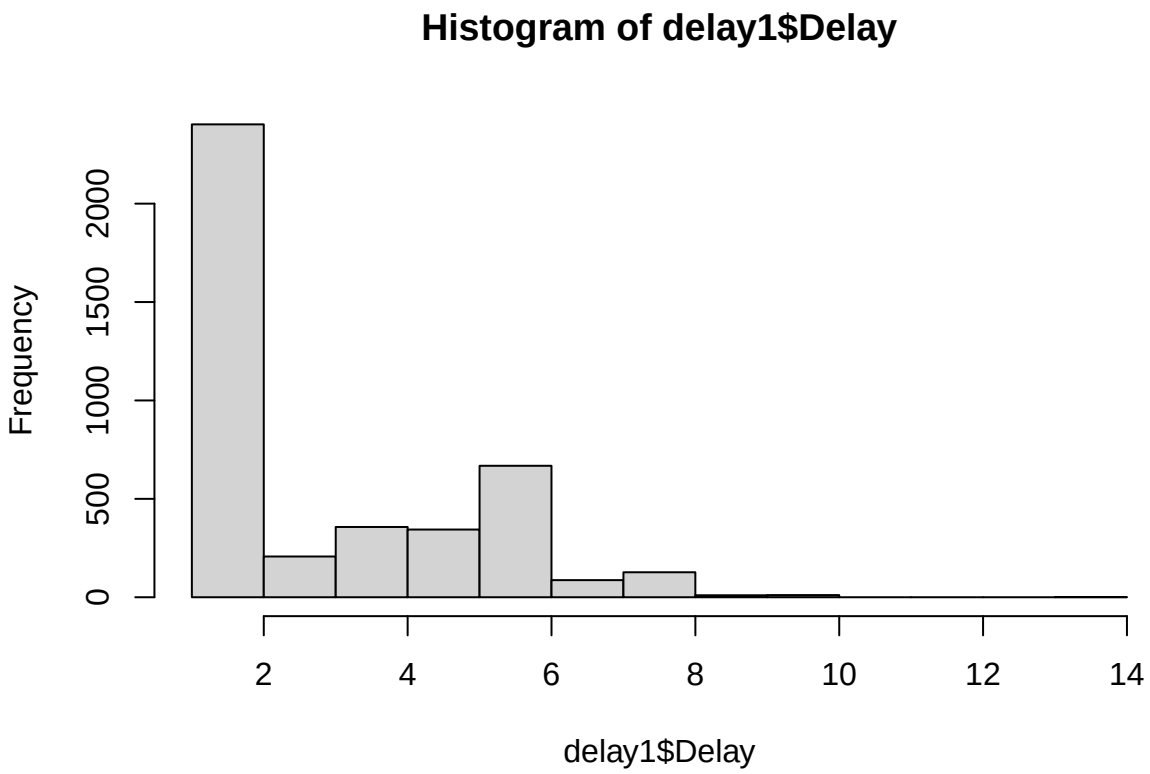
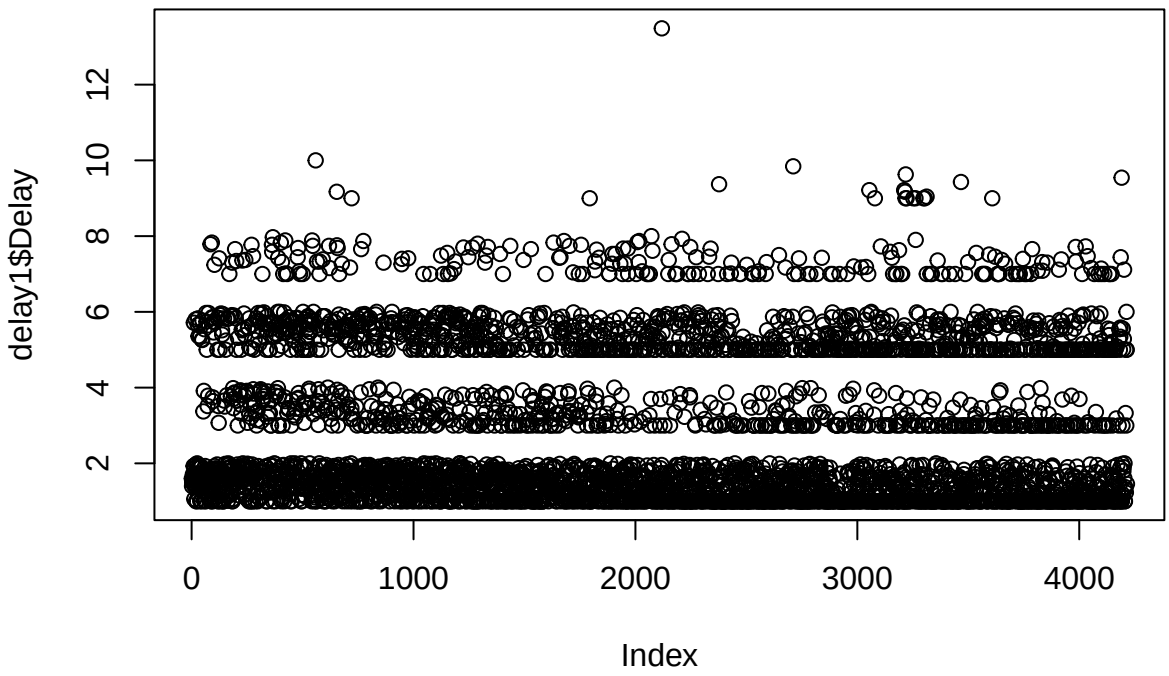
10
12

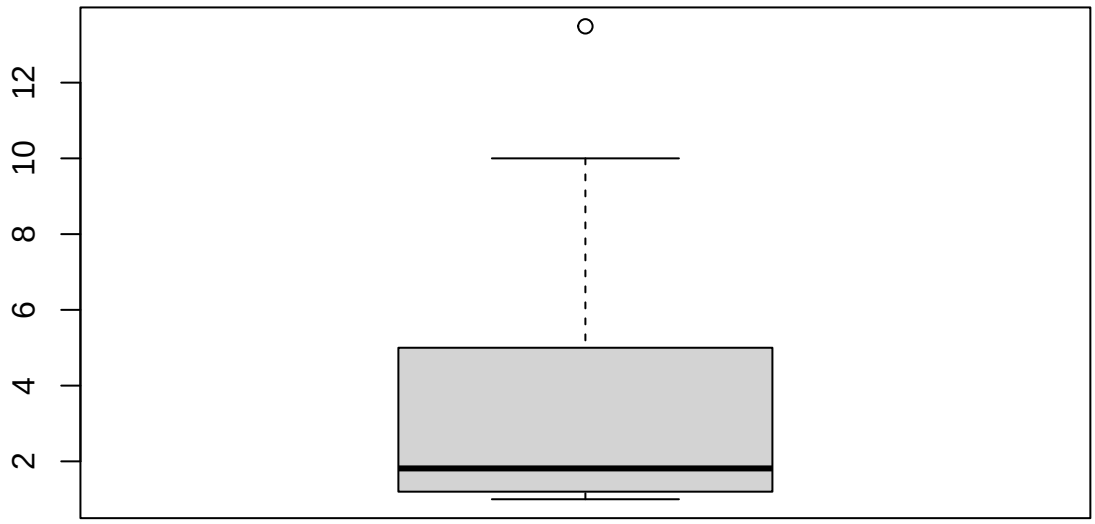

Histogram of delay08$Delay
Frequency
0
500
1000
1500
2000
2
4
6
8
10
12
14
delay08$Delay

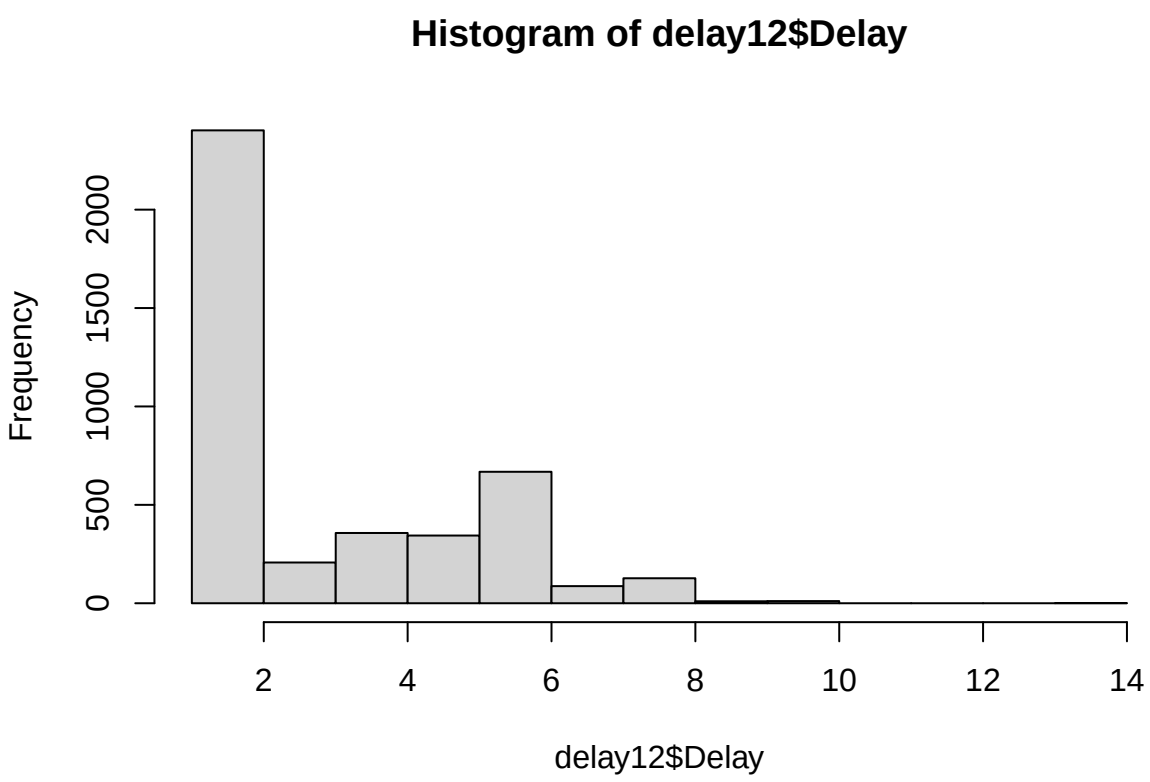

delay08$Delay
2
4
6
8
10
12
0
1000
2000
3000
4000
Index

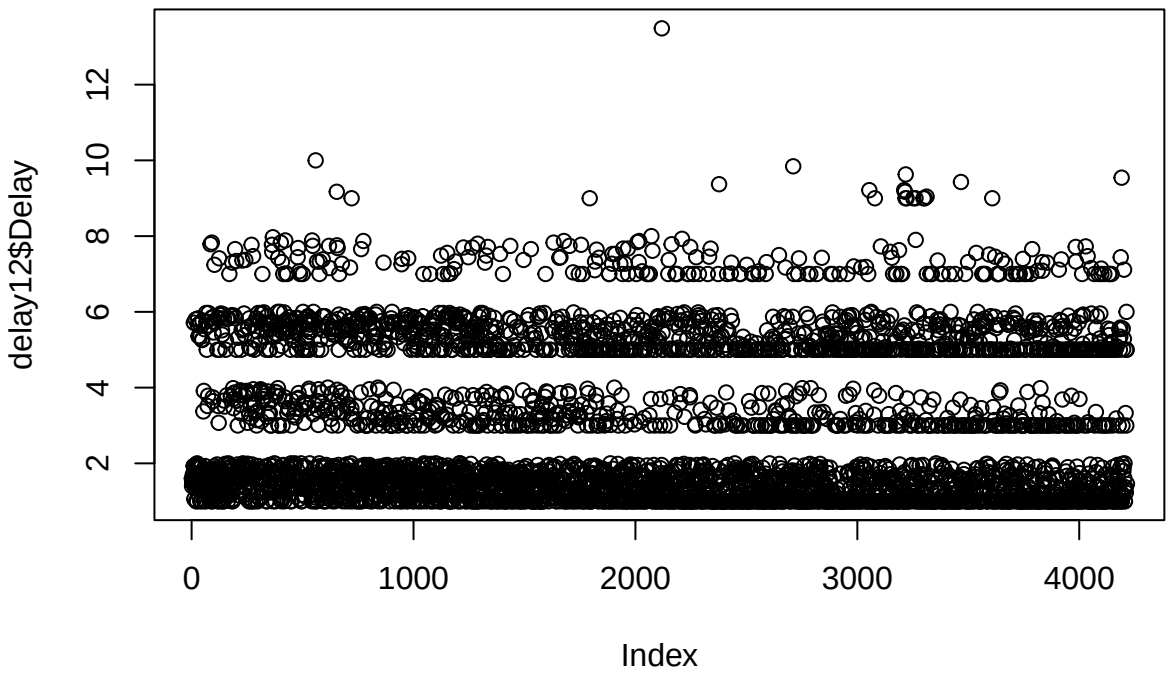

2
4
6
8
10
12


Histogram of delay1$Delay
Frequency
0
500
1000
1500
2000
2
4
6
8
10
12
14
delay1$Delay


delay1$Delay
2
4
6
8
10
12
0
1000
2000
3000
4000
Index


2
4
6
8
10
12


Histogram of delay12$Delay
Frequency
0
500
1000
1500
2000
2
4
6
8
10
12
14
delay12$Delay


delay12$Delay
2
4
6
8
10
12
0
1000
2000
3000
4000
Index