

# Mobility

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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 20GB SBS 4GB
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	2, 4, 6, 8, 10, 40, 70m

## Informações da Aplicação.

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

## Tempo de execução da otimização.

### Distribuição de popularidade do conteúdo solicitado.

$\alpha : 2 = 96\% - 480/500.$

$\alpha : 4 = 100\% - 500/500.$

$\alpha : 6 = 99\% - 495/500.$

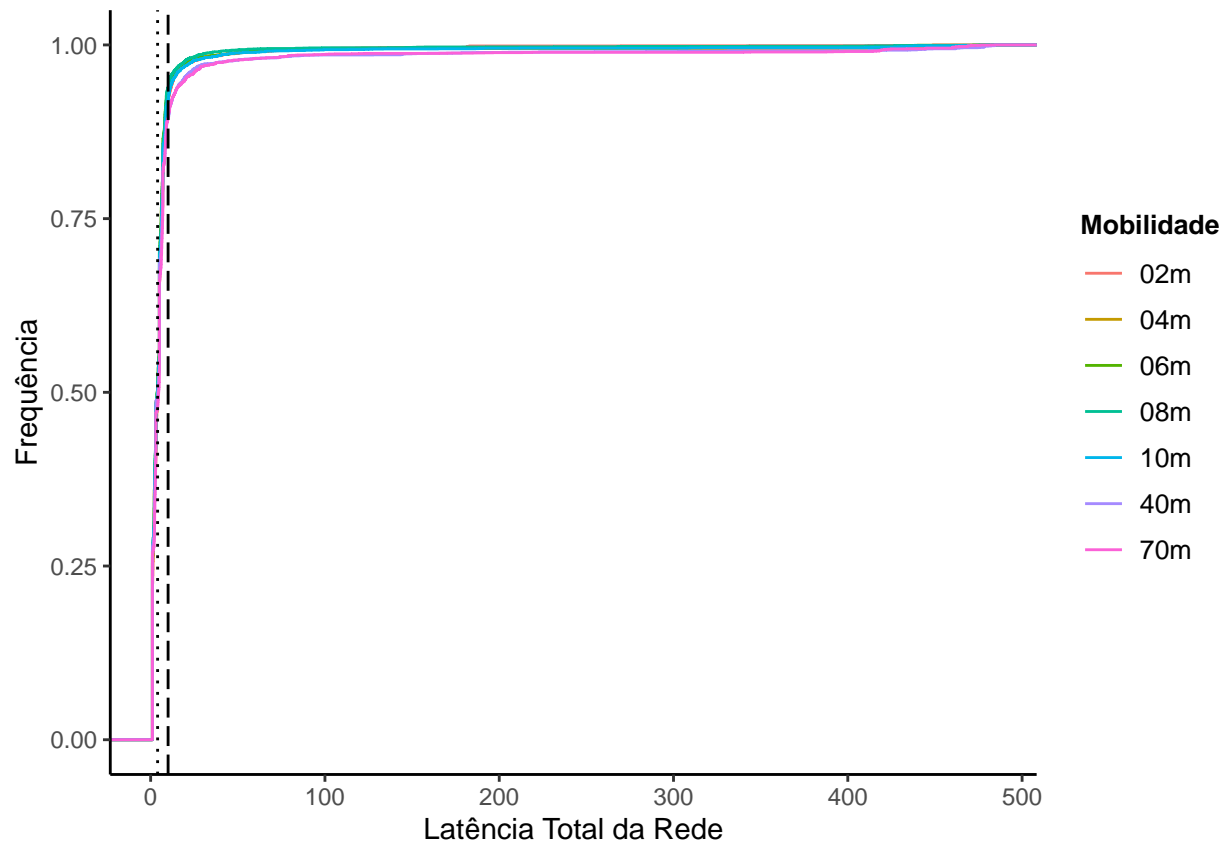
$\alpha : 8 = 97\% - 485/500.$

$\alpha : 10 = 99\% - 495/500.$

$\alpha : 40 = 92\% - 460/500.$

$\alpha : 70 = 90.8\% - 454/500.$

## Distribuição da Latência



### *Mobility: 2*

Em 47.95% da amostra a latência das requisições são menores que 4 milissegundos.

Em 91.53% da amostra a latência das requisições são menores que 10 milissegundos.

### *Mobility: 4*

Em 49.34% da amostra a latência das requisições são menores que 4 milissegundos.

Em 93.3% da amostra a latência das requisições são menores que 10 milissegundos.

### *Mobility: 6*

Em 50.44% da amostra a latência das requisições são menores que 4 milissegundos.

Em 93.51% da amostra a latência das requisições são menores que 10 milissegundos.

### *Mobility: 8*

Em 50.09% da amostra a latência das requisições são menores que 4 milissegundos.

Em 93.86% da amostra a latência das requisições são menores que 10 milissegundos.

### *Mobility: 10*

Em 49.53% da amostra a latência das requisições são menores que 4 milissegundos.

Em 92.03% da amostra a latência das requisições são menores que 10 milissegundos.

### *Mobility: 40*

Em 49.1% da amostra a latência das requisições são menores que 4 milissegundos.

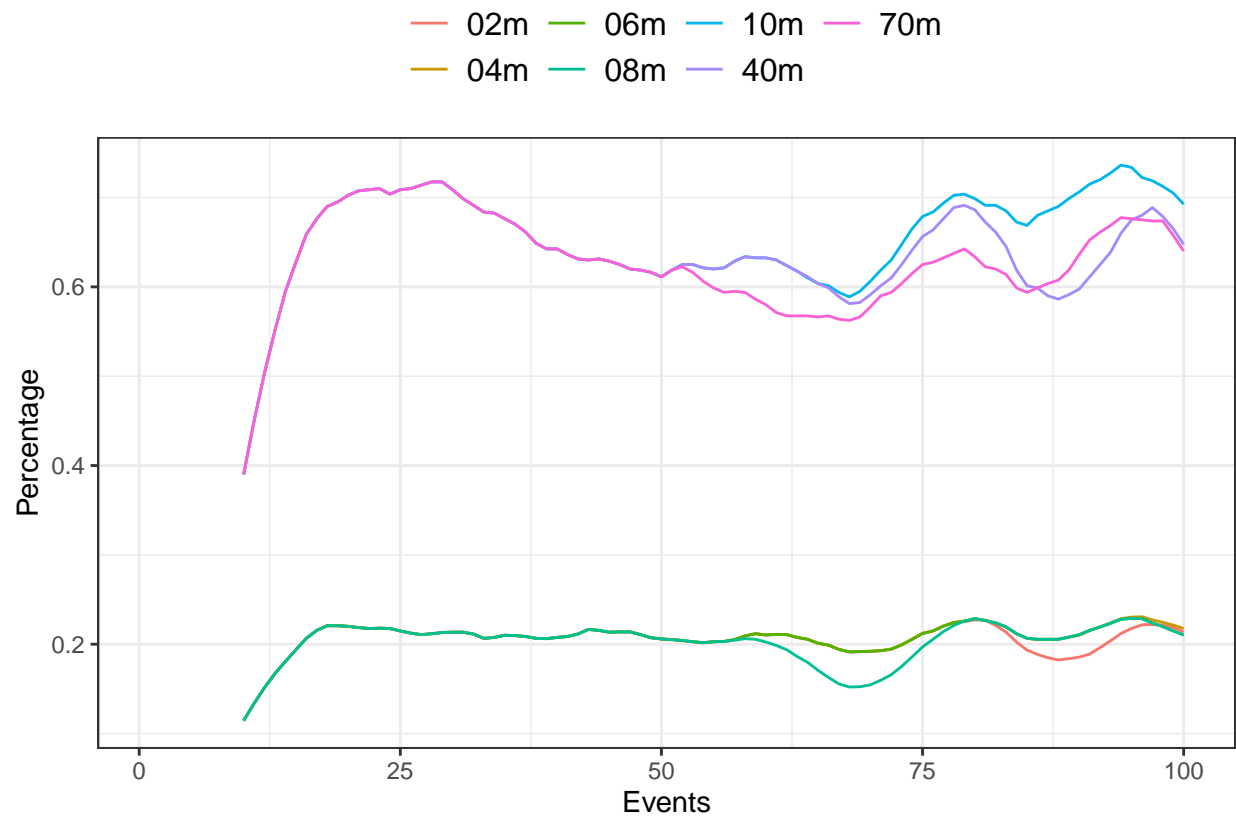
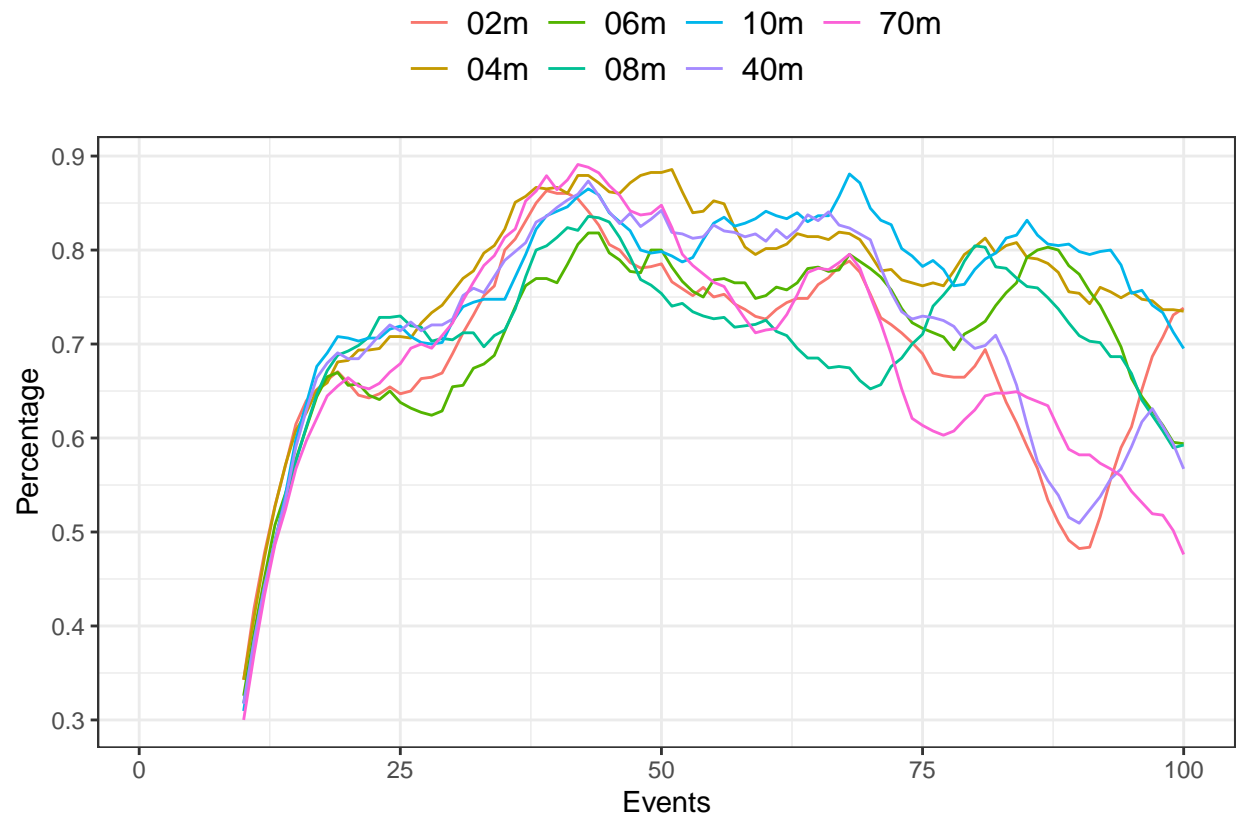
Em 89.37% da amostra a latência das requisições são menores que 10 milisegundos.

*Mobility:* 70

Em 47.66% da amostra a latência das requisições são menores que 4 milisegundos.

Em 89.39% da amostra a latência das requisições são menores que 10 milisegundos.

Cache, Cloud e Storage.



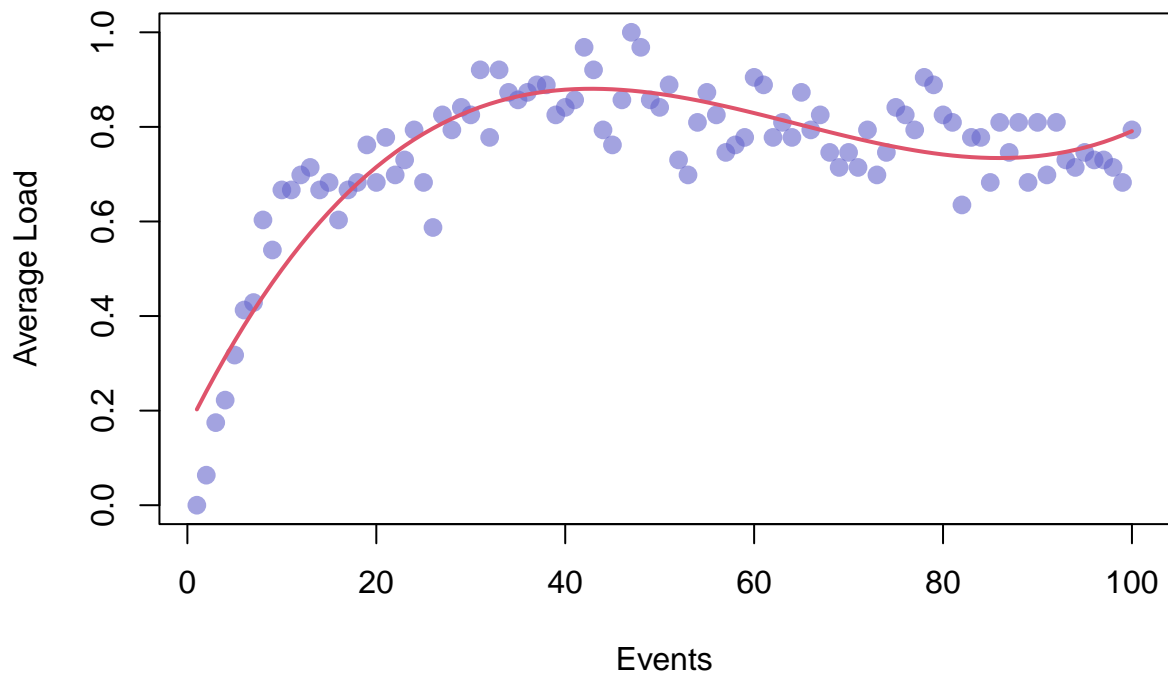
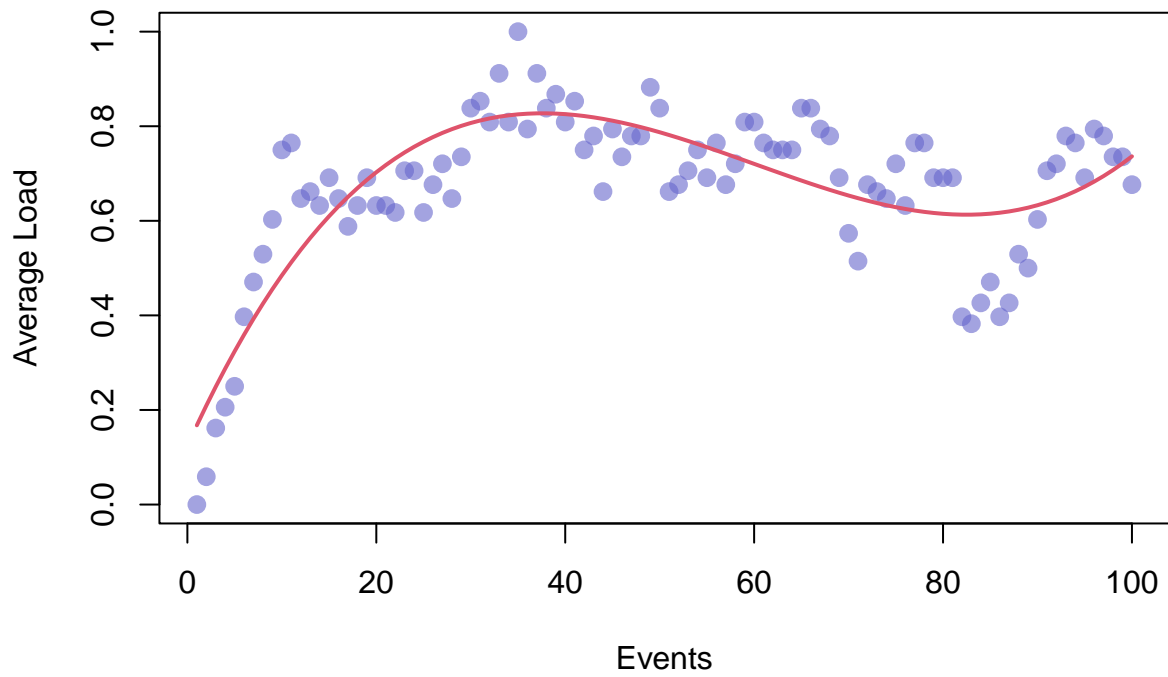
Correlação entre as medianas da latência e variação da mobilidade.

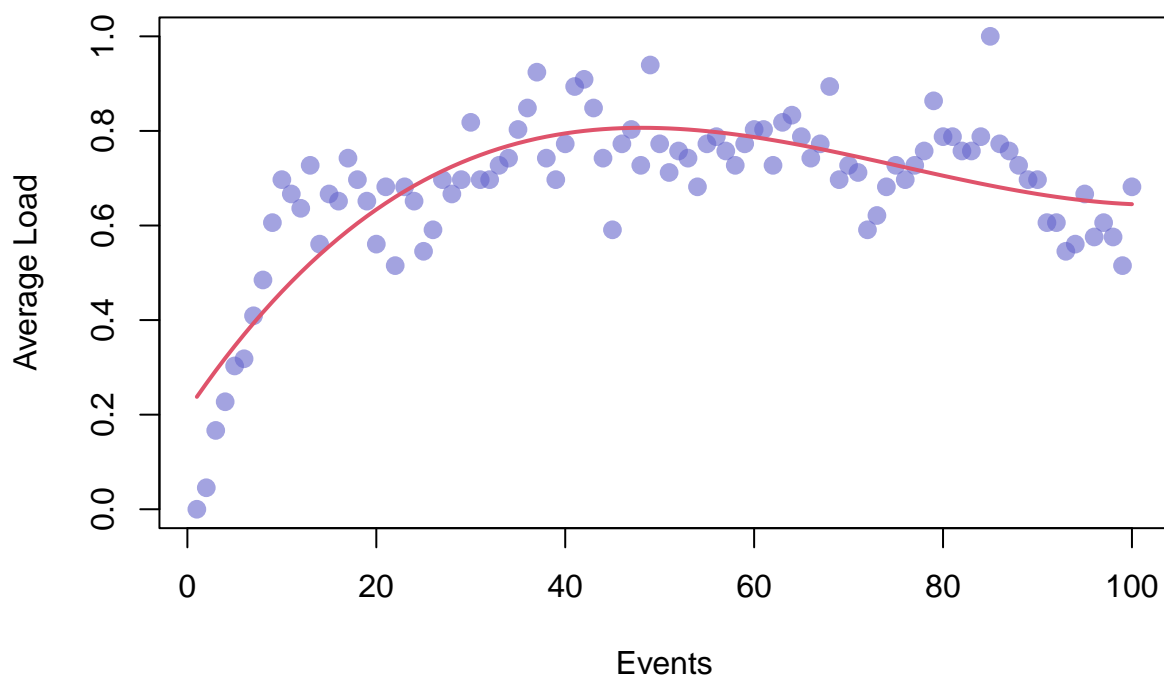
```
## [1] 0.868451
```

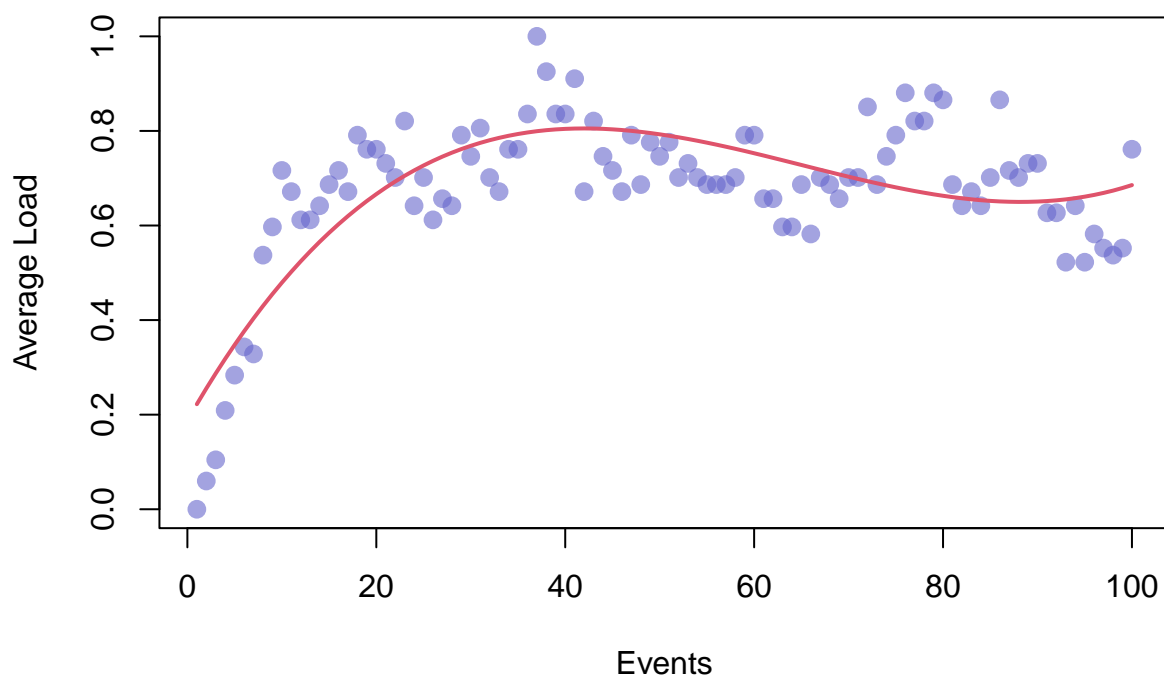
Correlação entre taxas aceitação e variação da mobilidade.

```
## [1] -0.884932
```

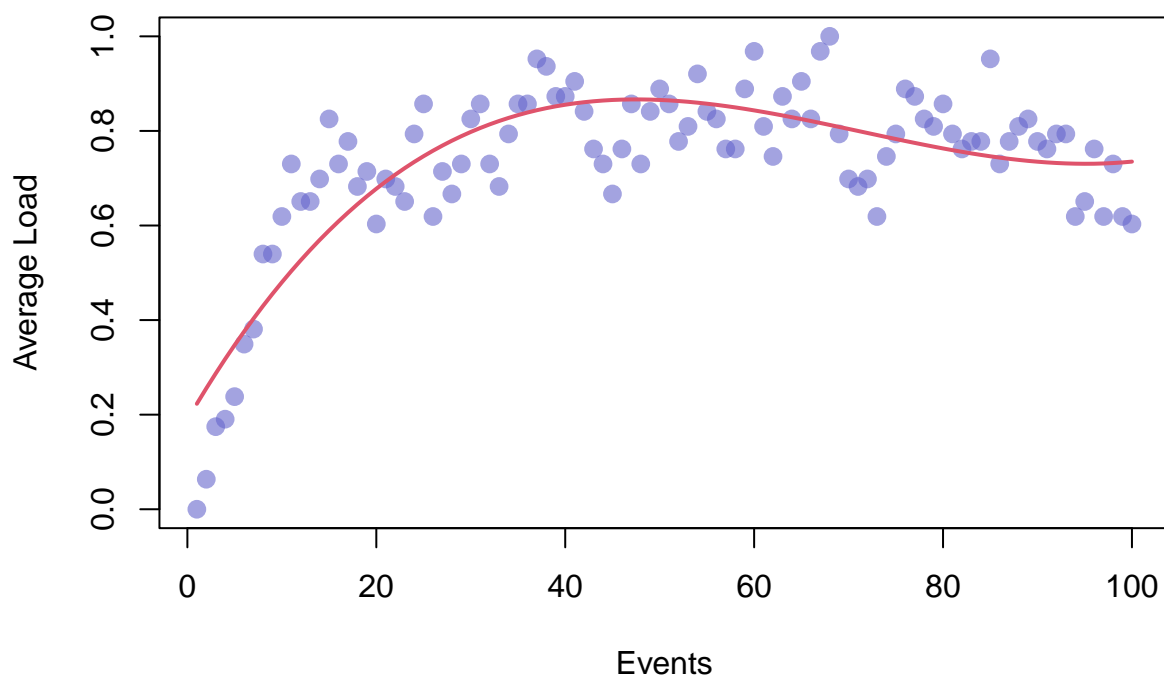
Somatório da Carga dos enlaces ópticos por evento(normalizado pelo maior somatório).

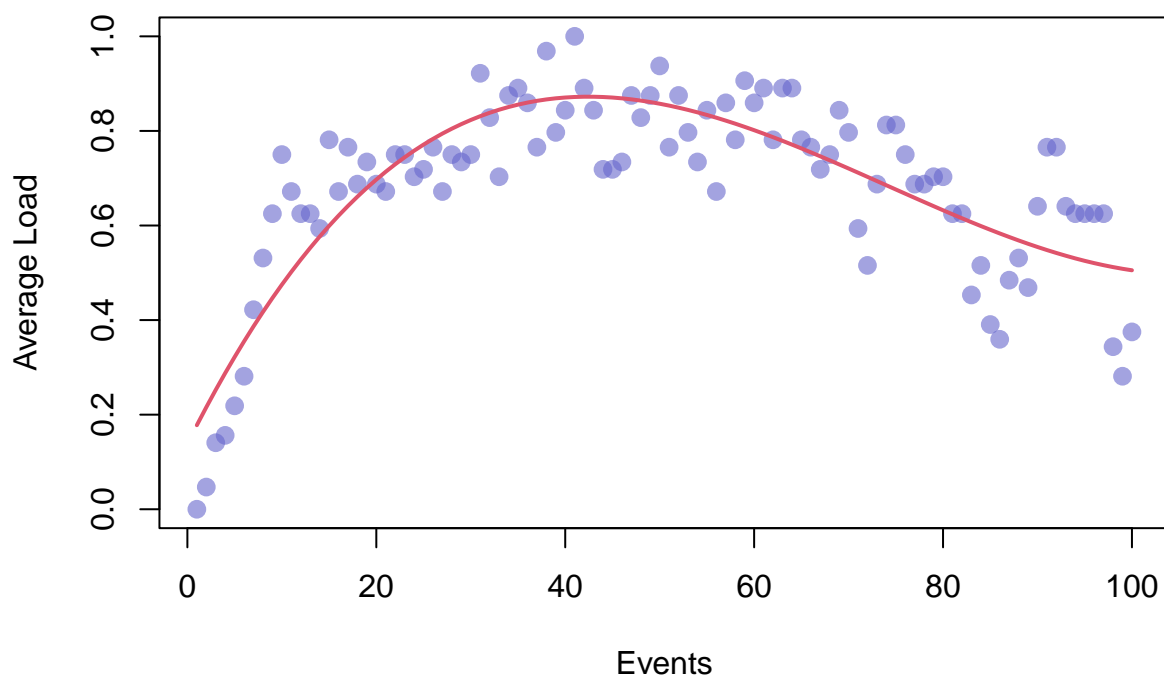


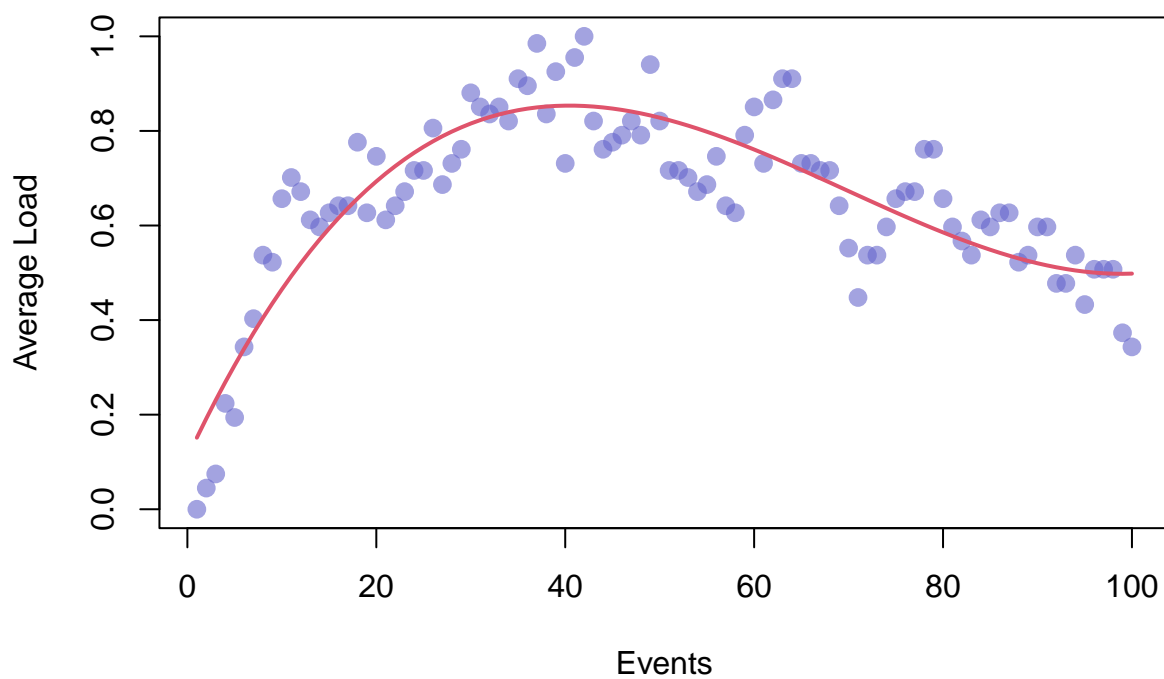


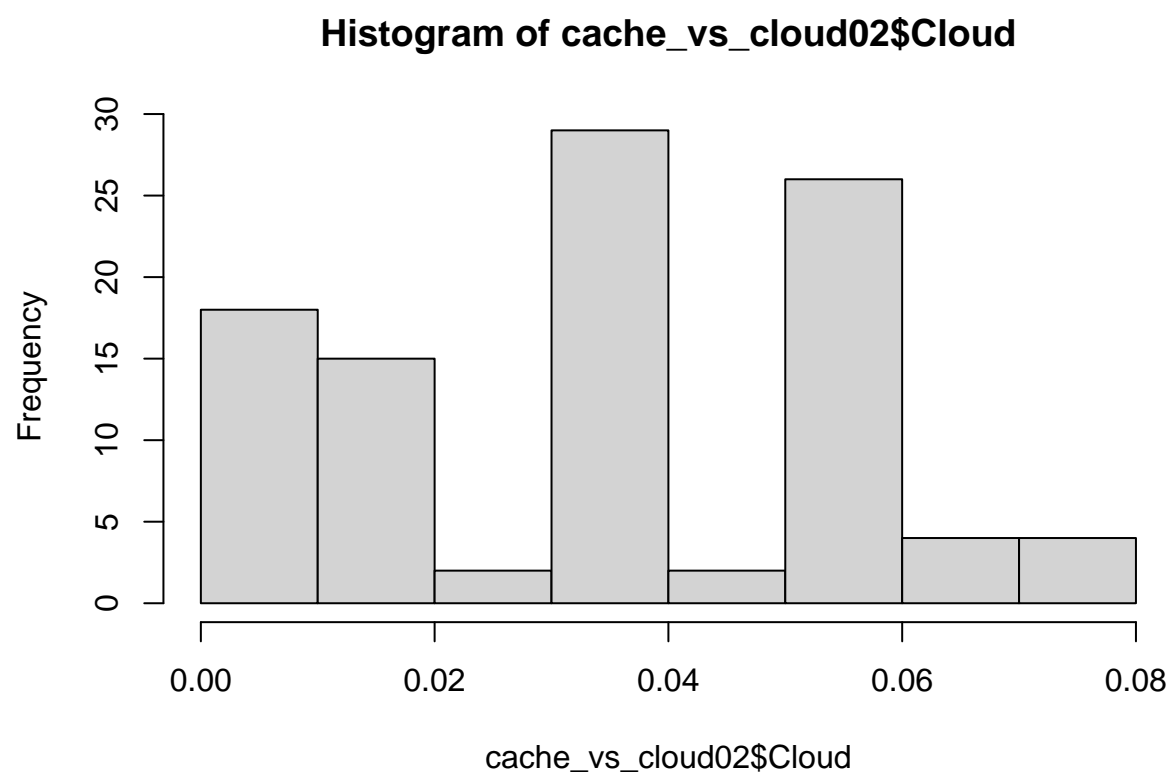


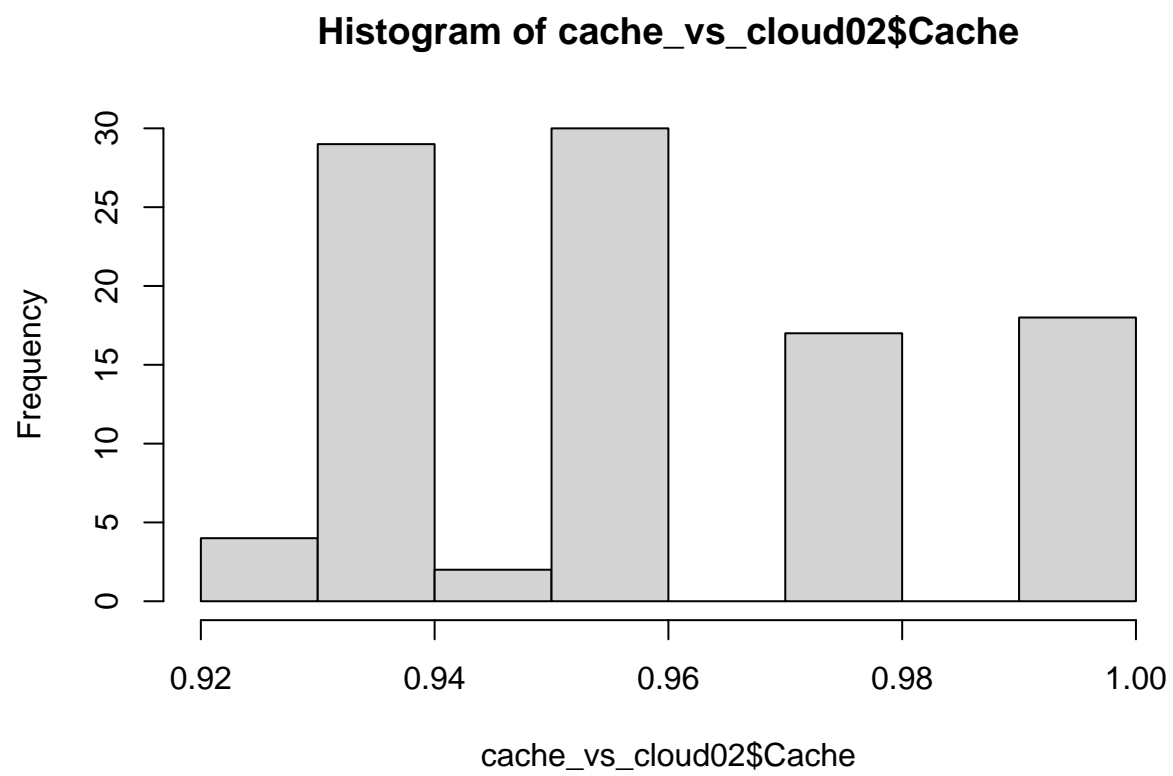




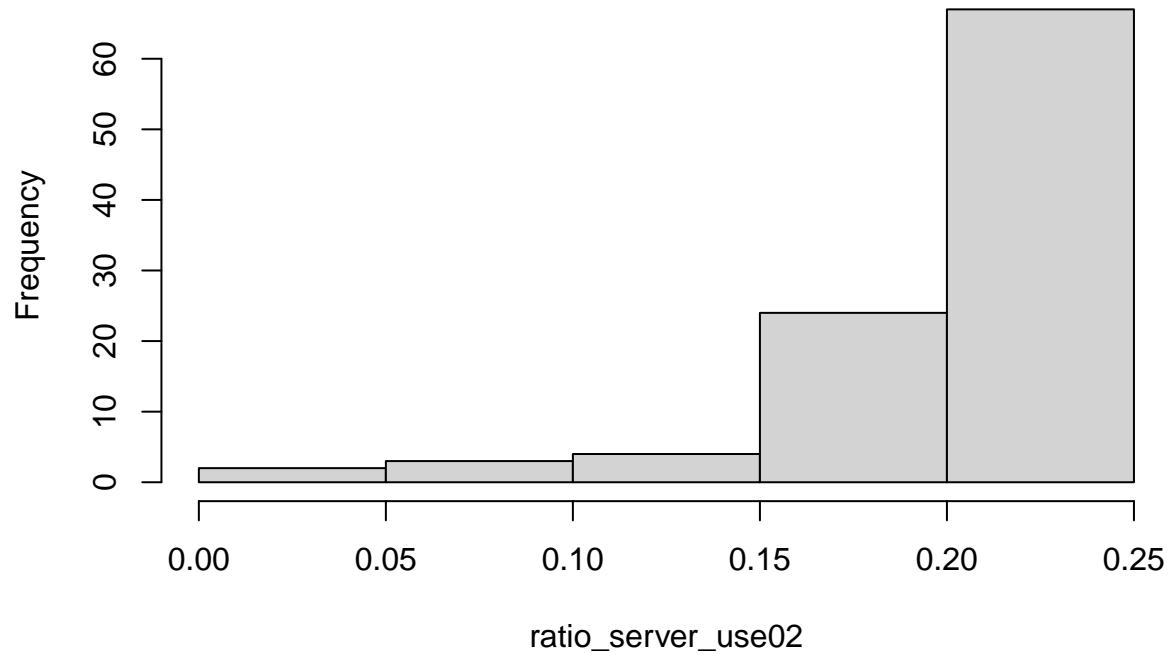


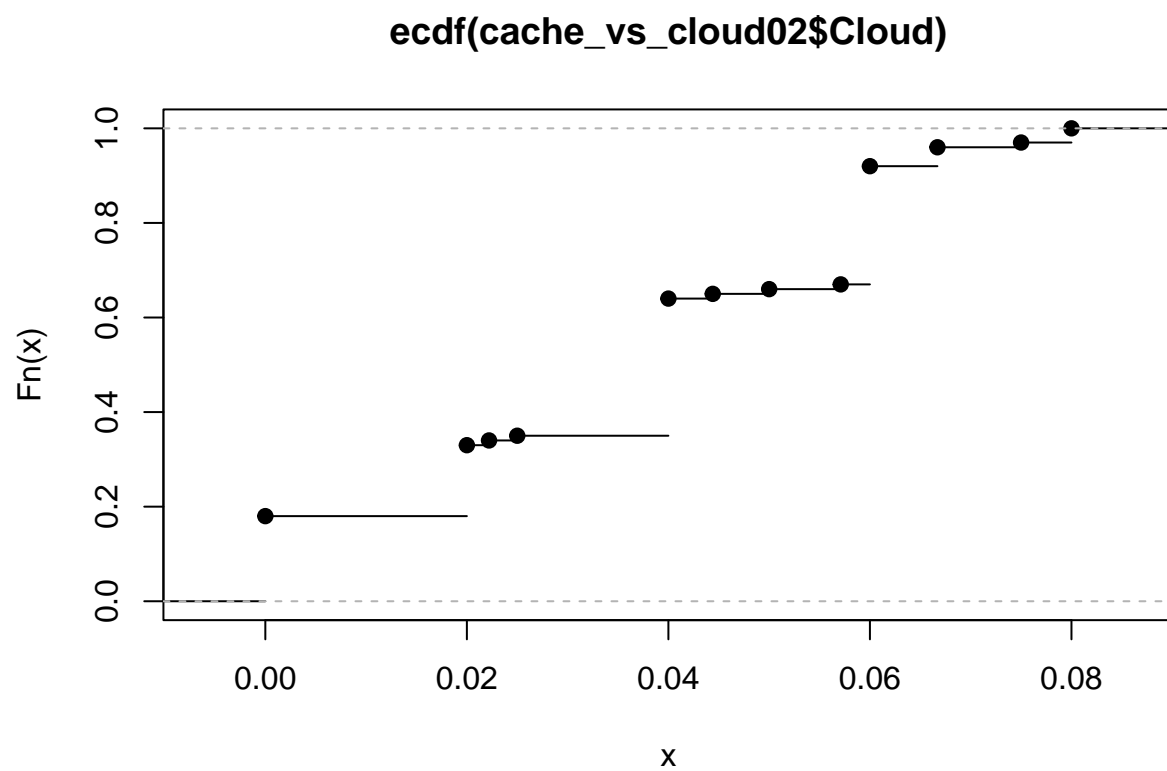


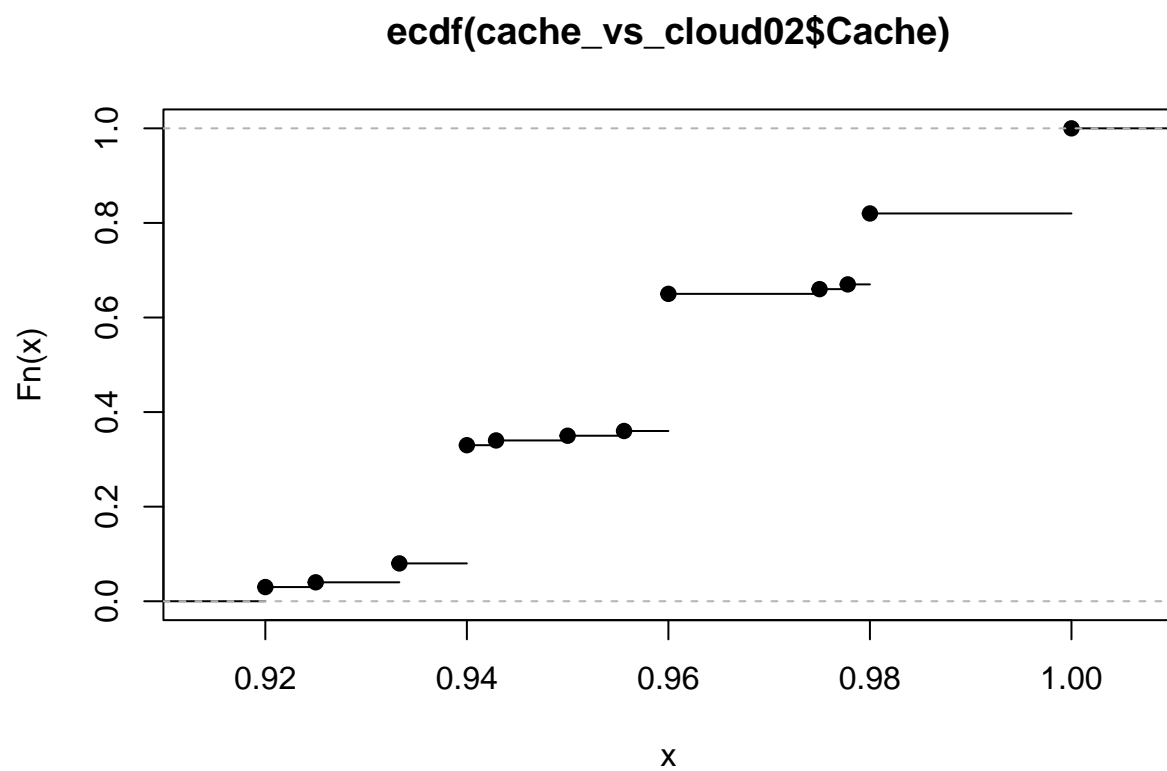




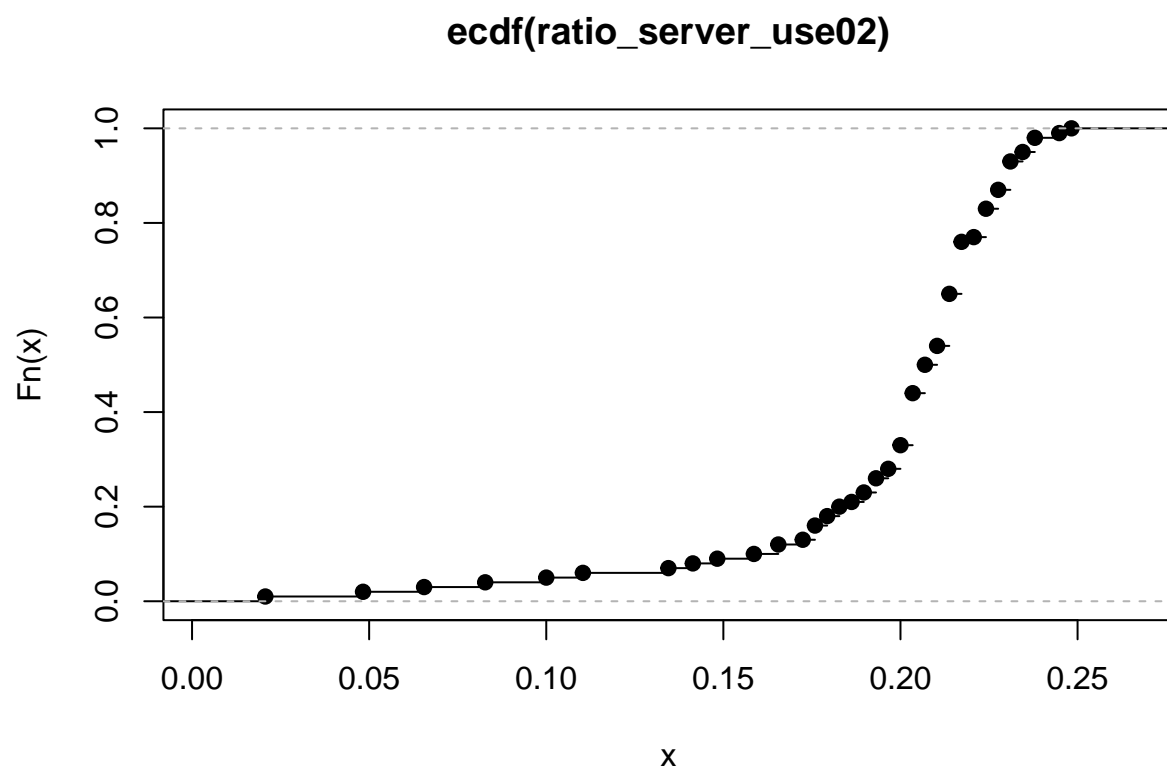
**Histogram of ratio\_server\_use02**



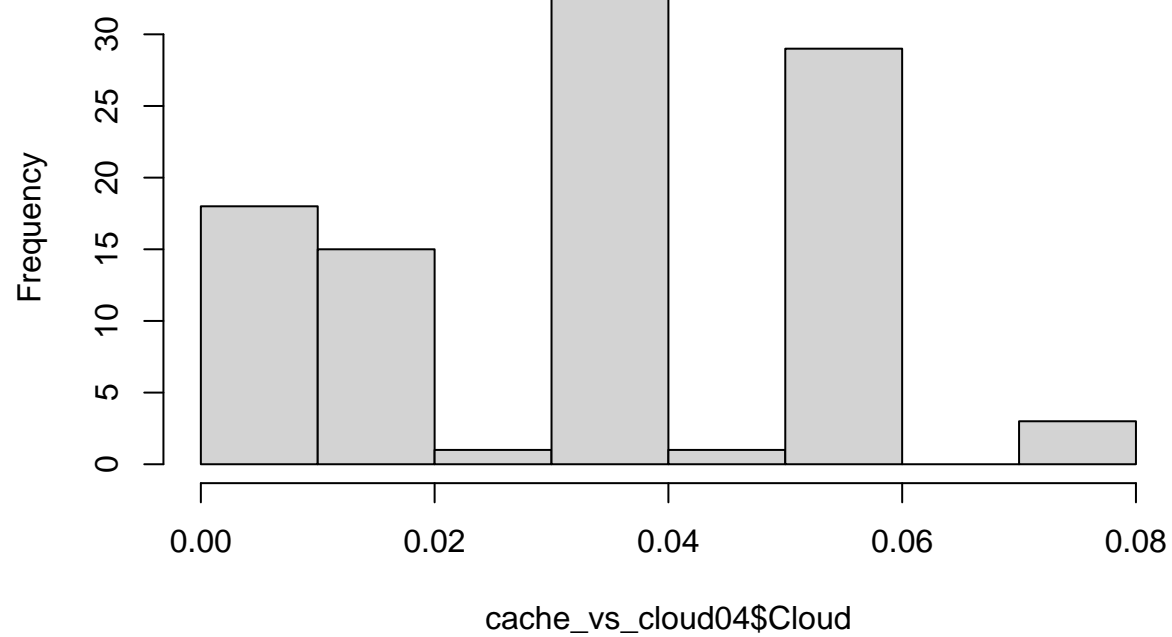


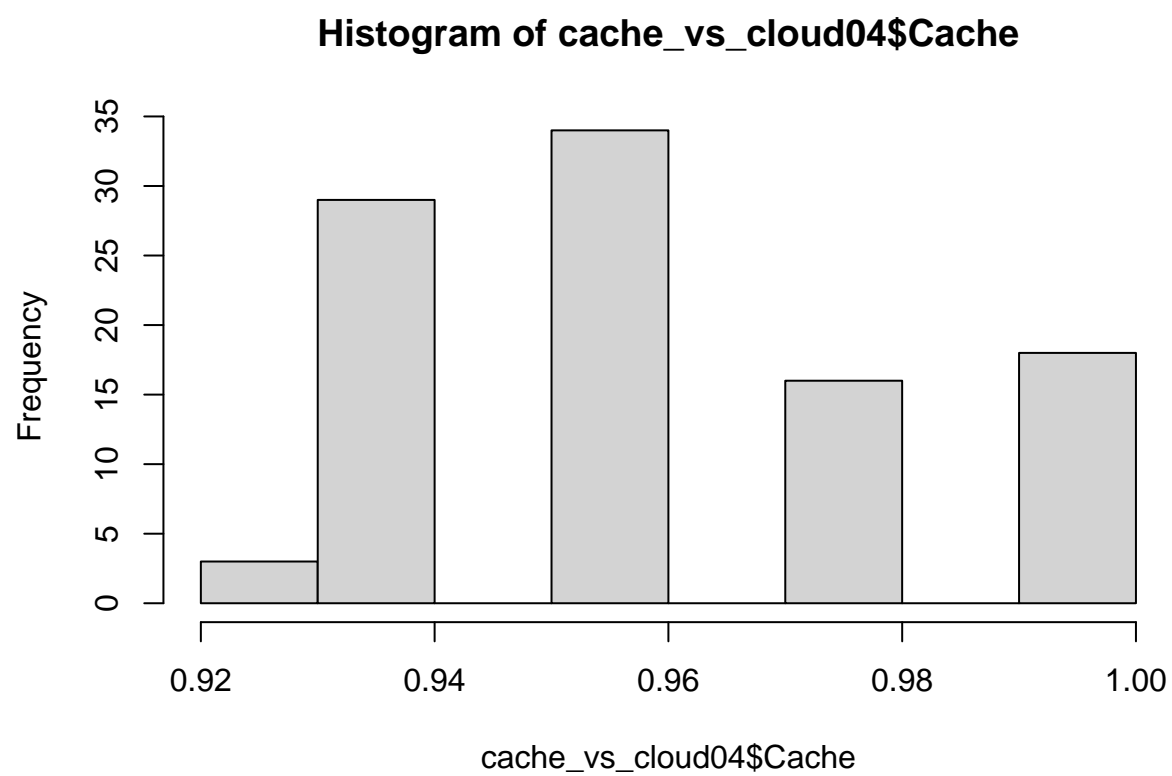




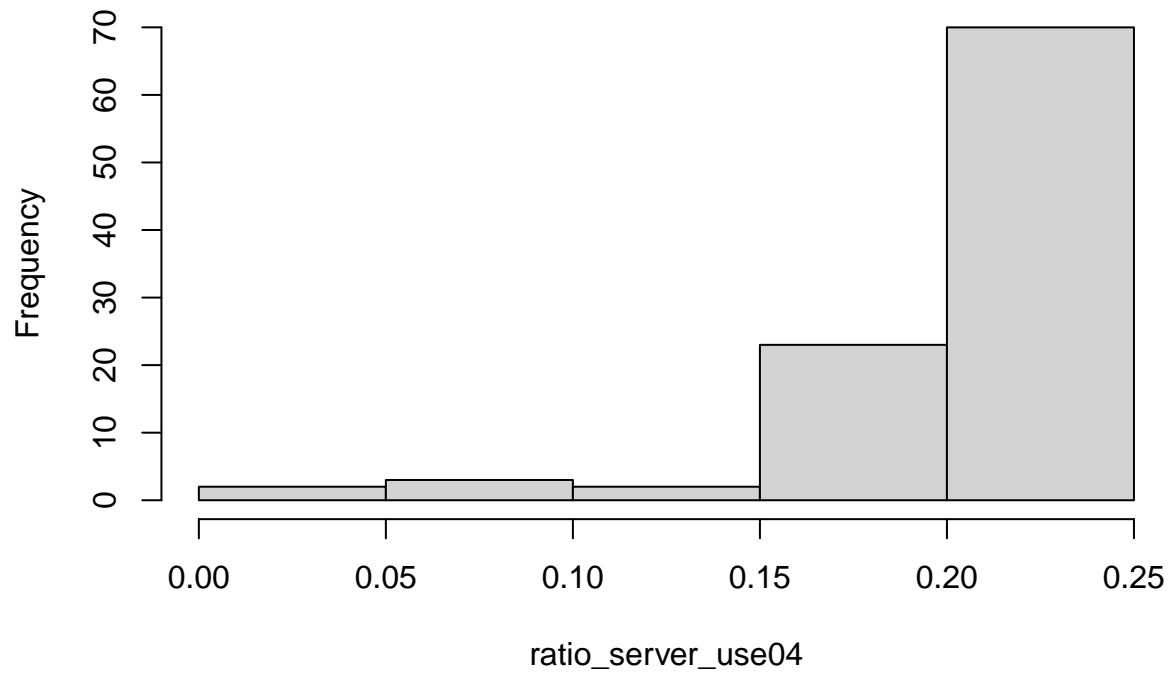


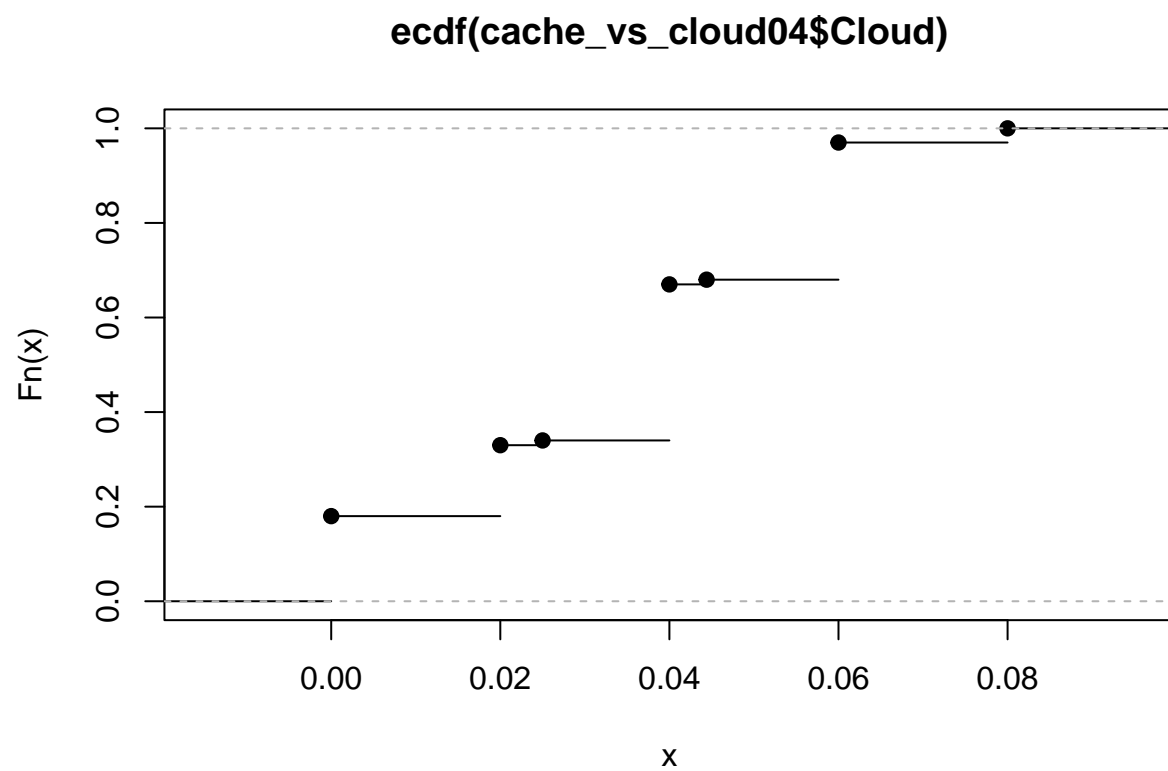
**Histogram of cache\_vs\_cloud04\$Cloud**

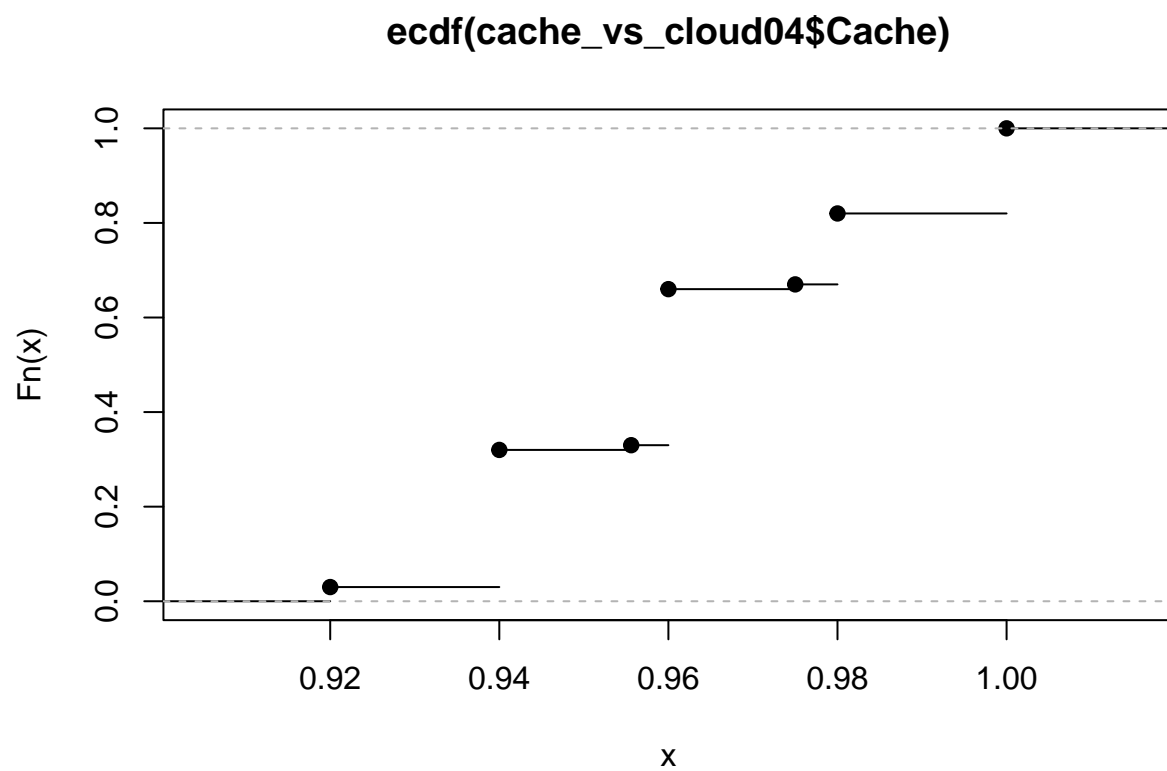


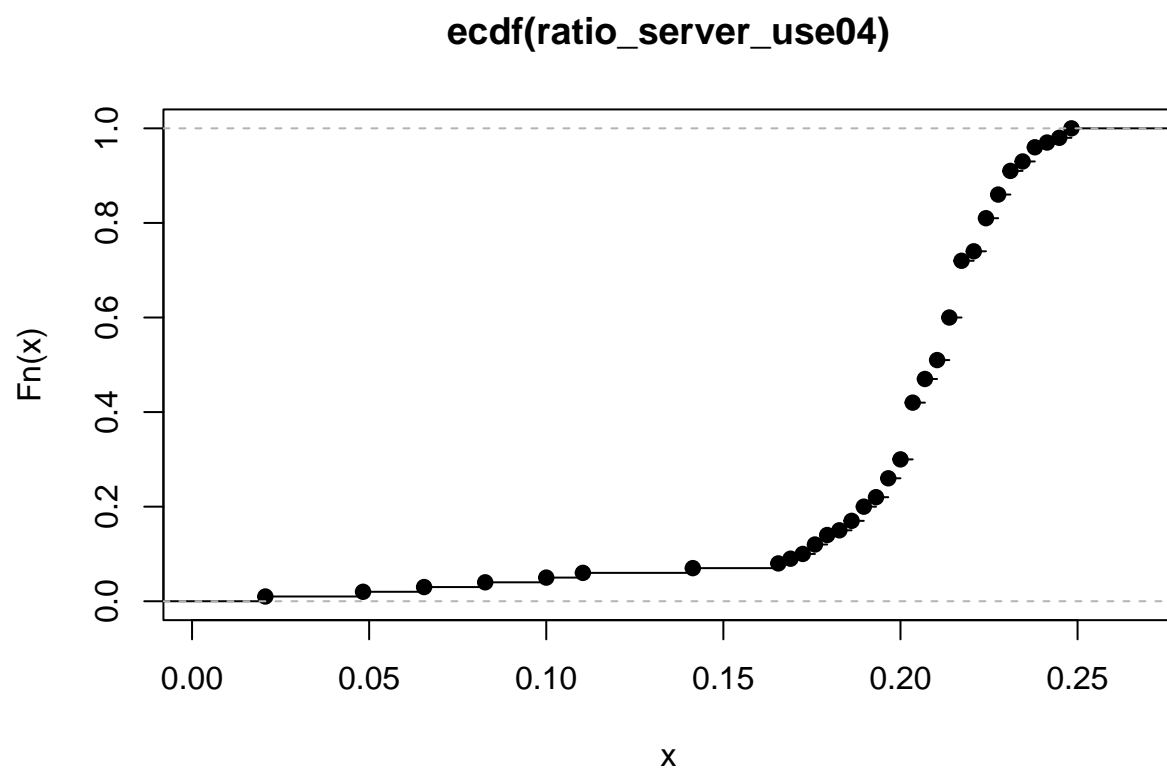


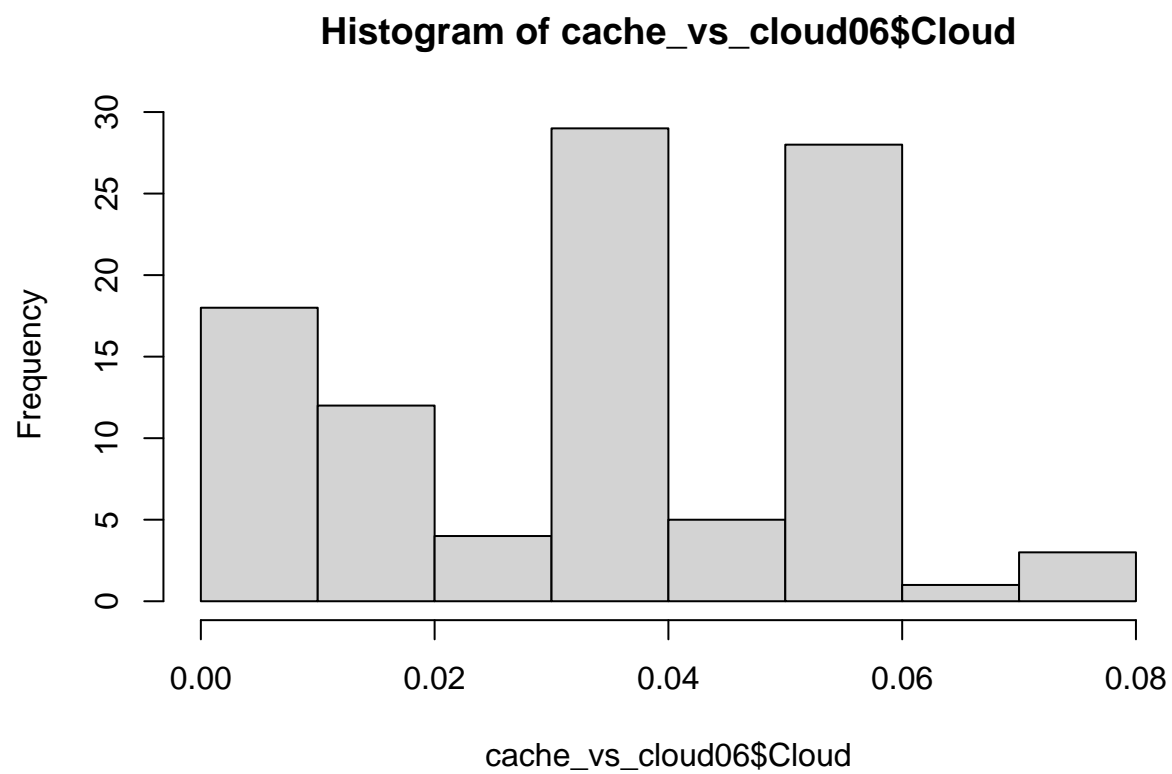
**Histogram of ratio\_server\_use04**



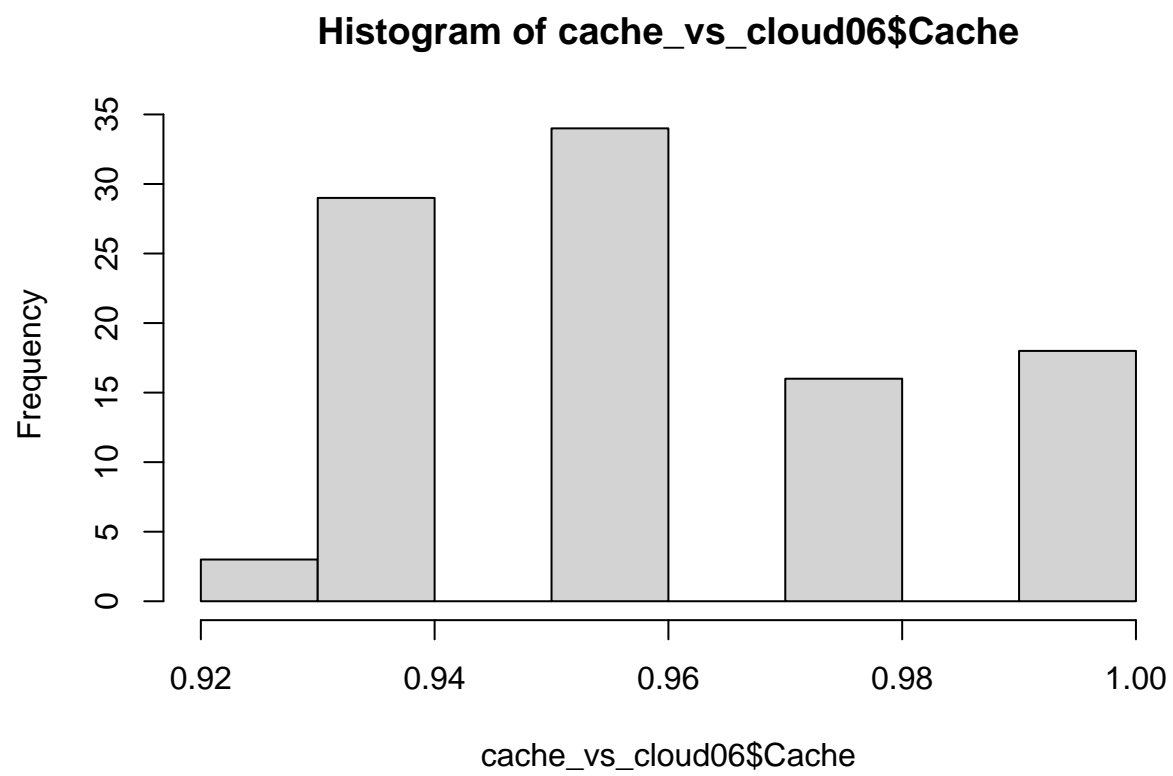




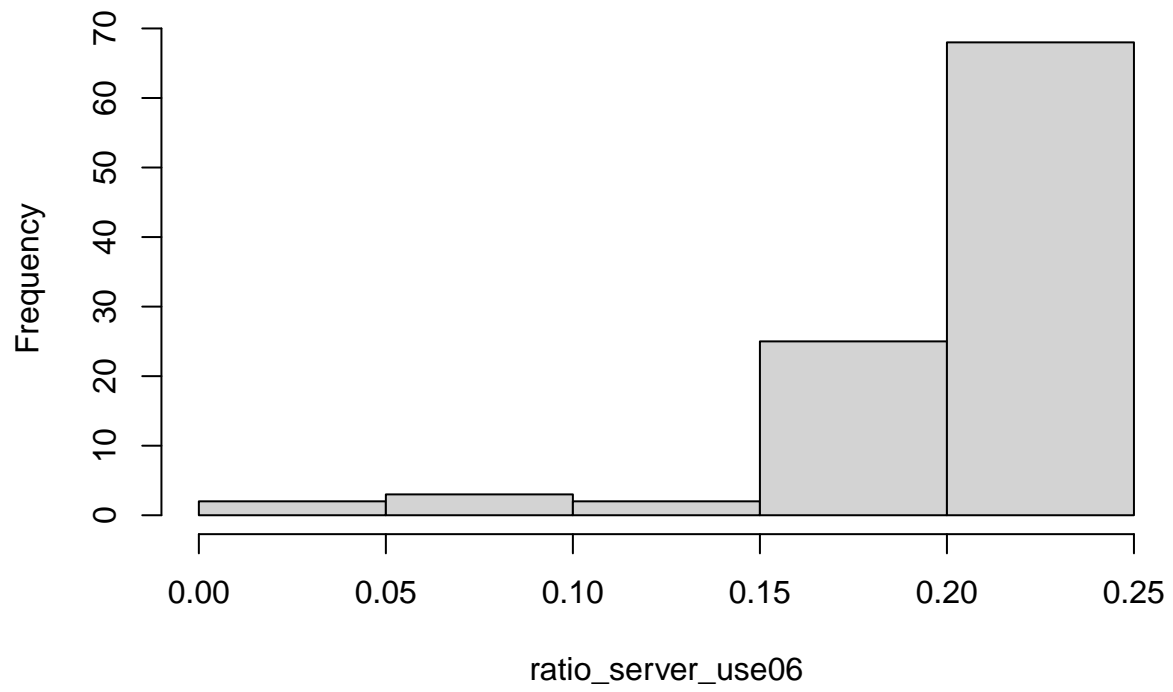




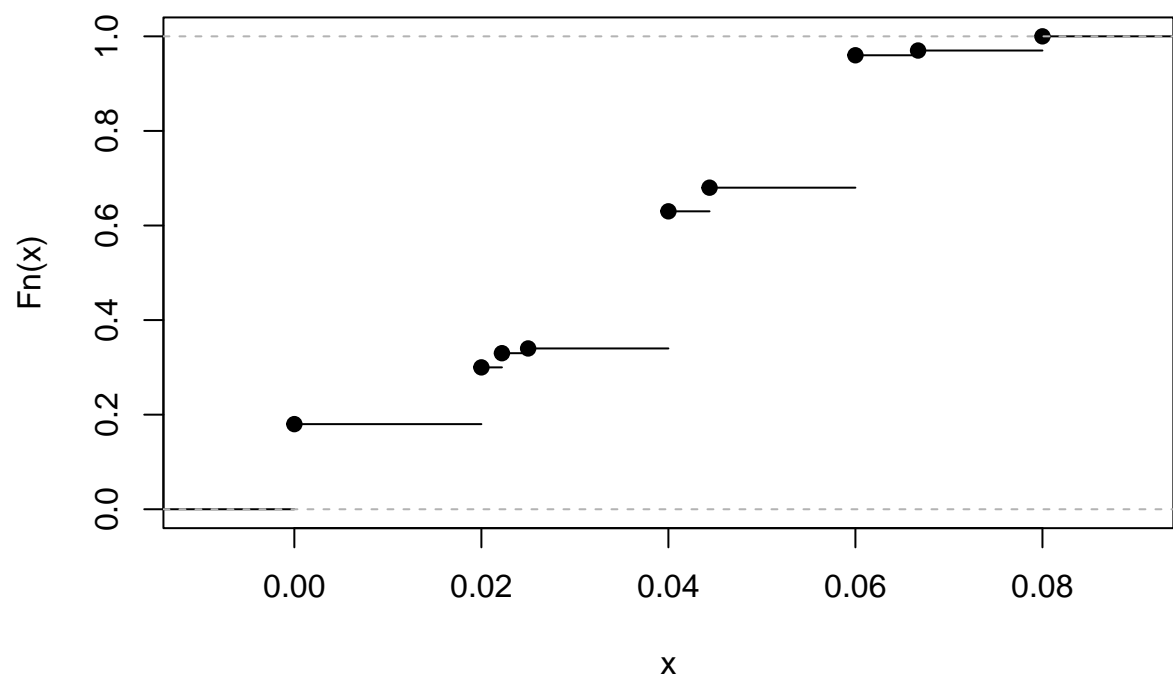


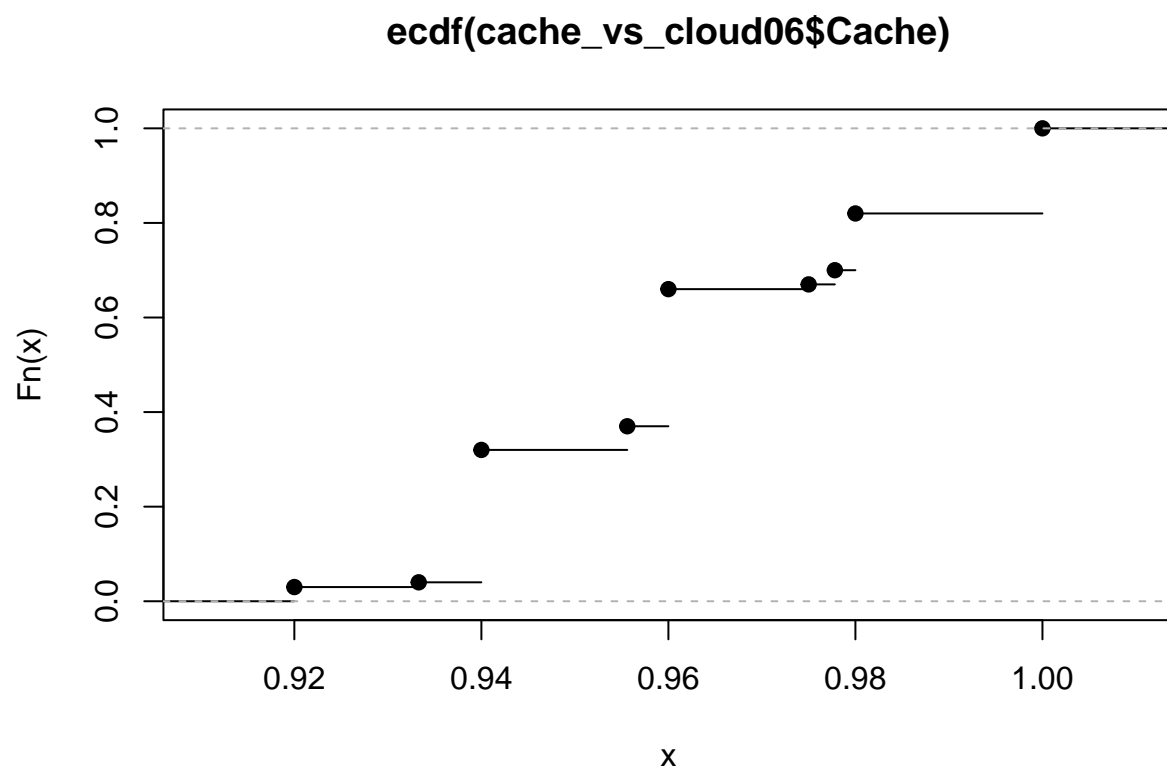


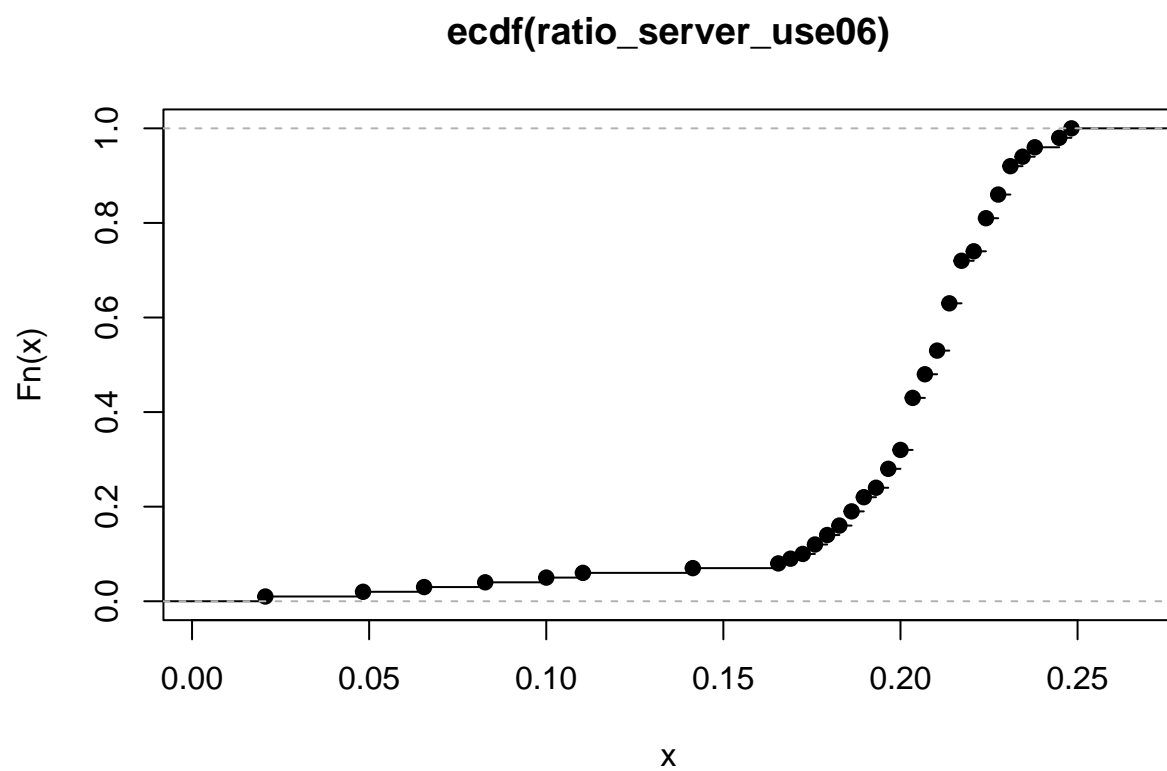
**Histogram of ratio\_server\_use06**



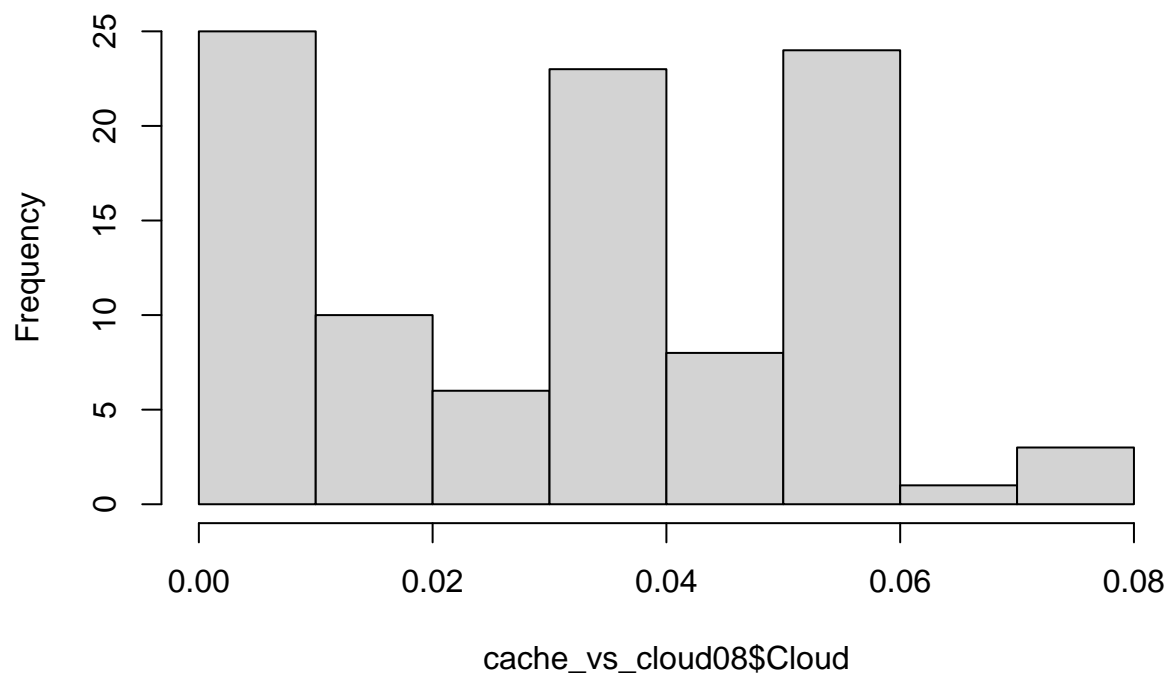
ecdf(cache\_vs\_cloud06\$Cloud)



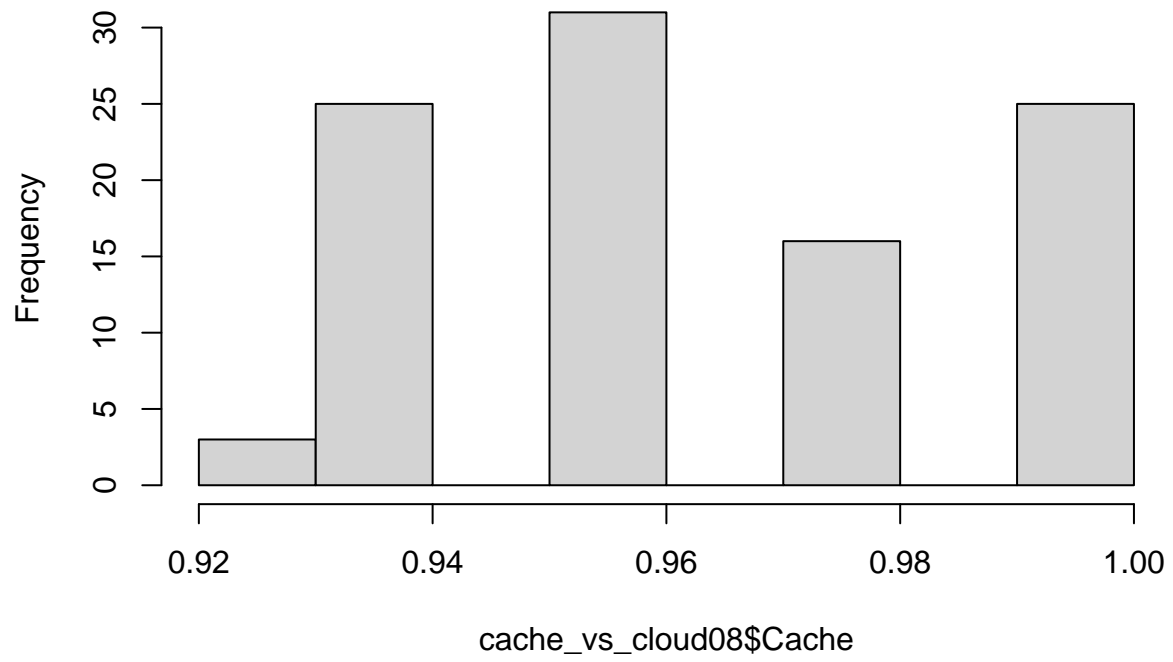




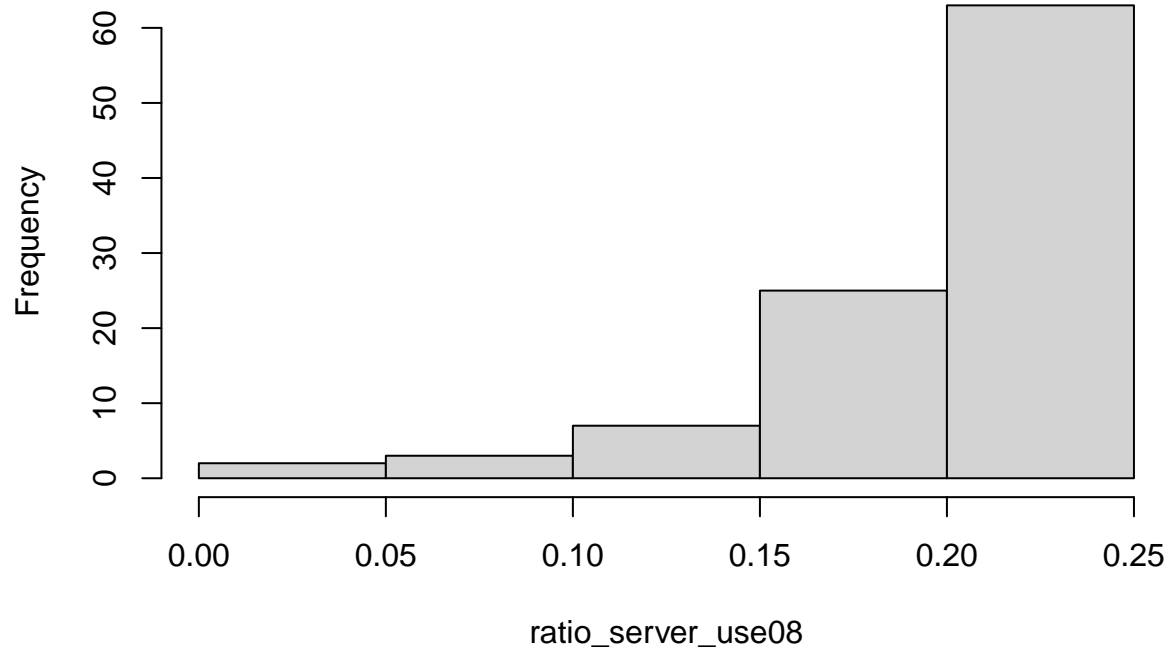
**Histogram of cache\_vs\_cloud08\$Cloud**



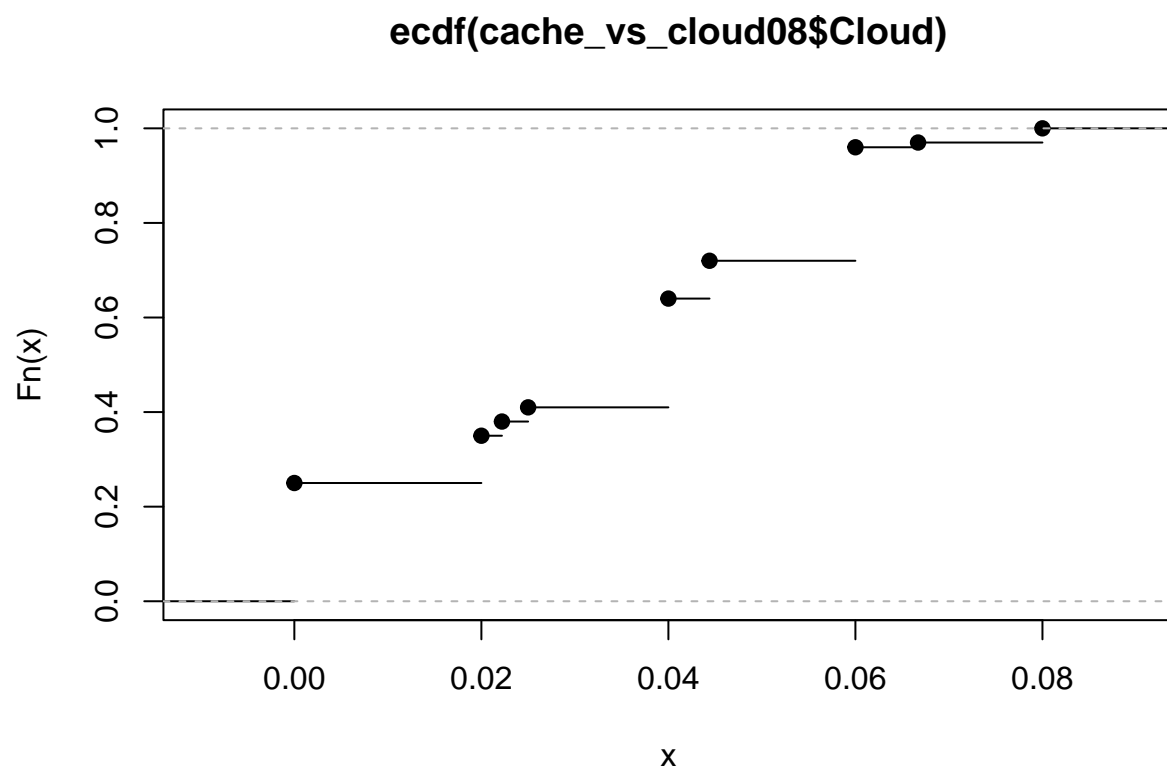
**Histogram of cache\_vs\_cloud08\$Cache**

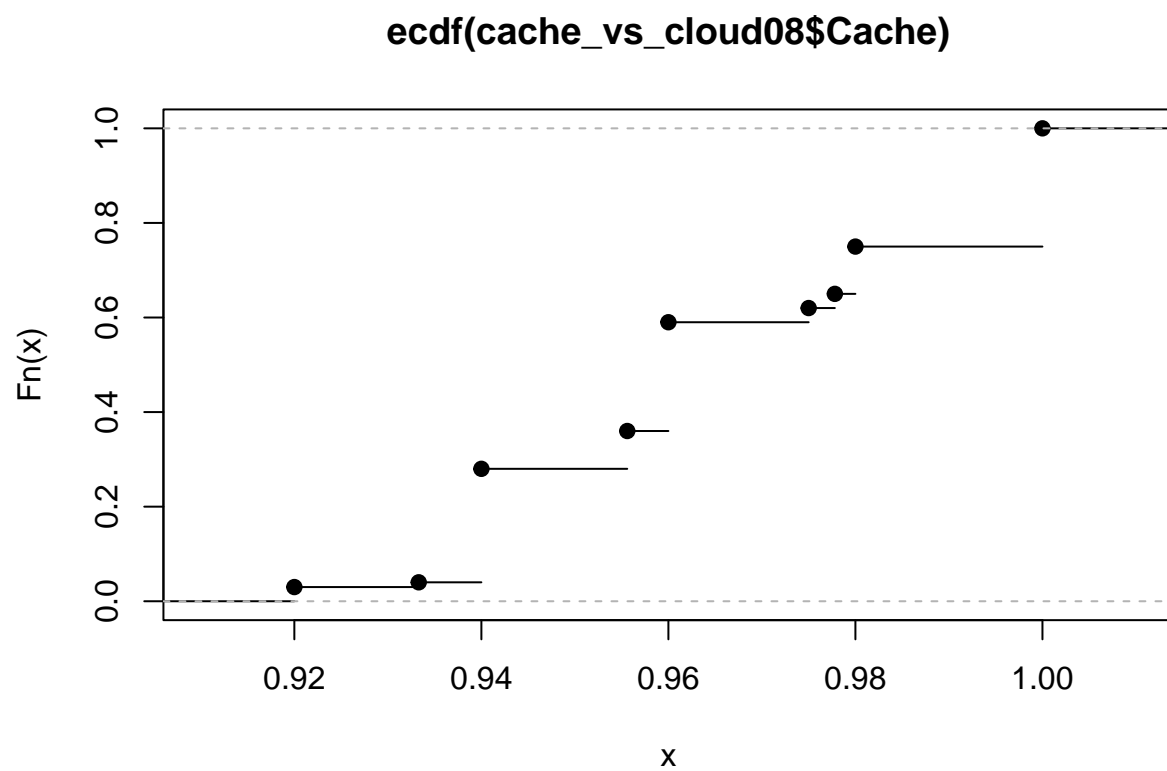


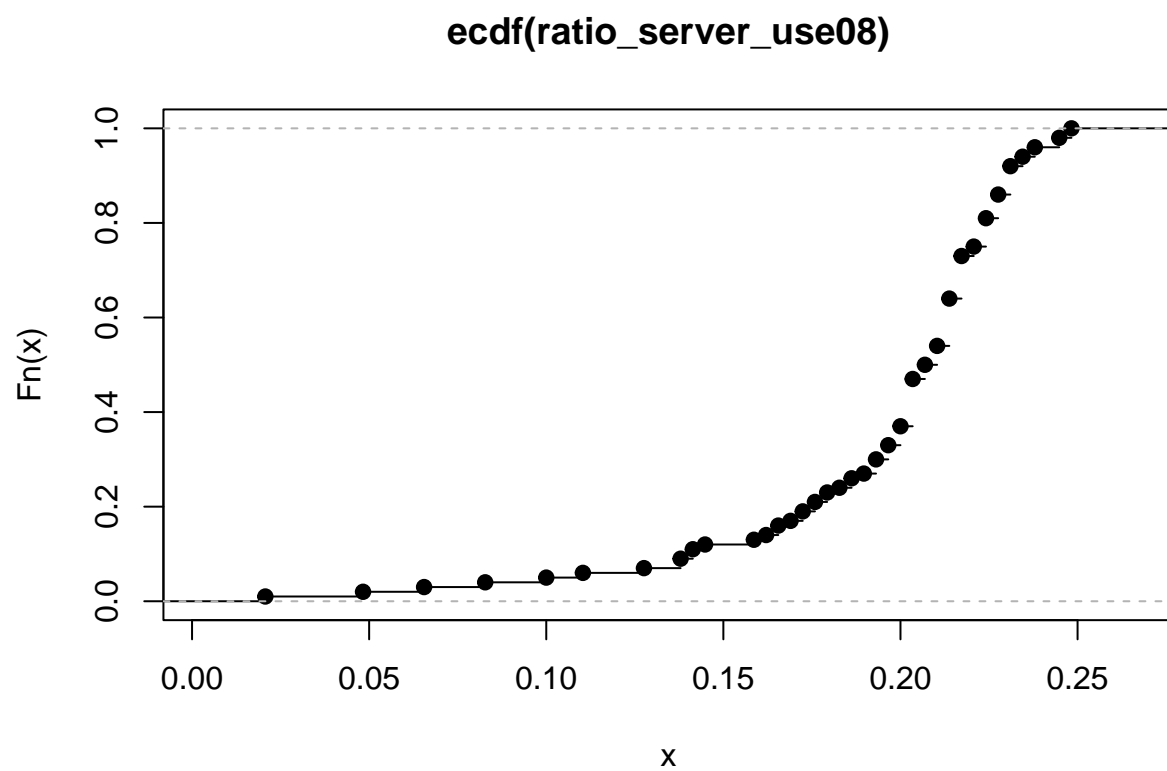
**Histogram of ratio\_server\_use08**



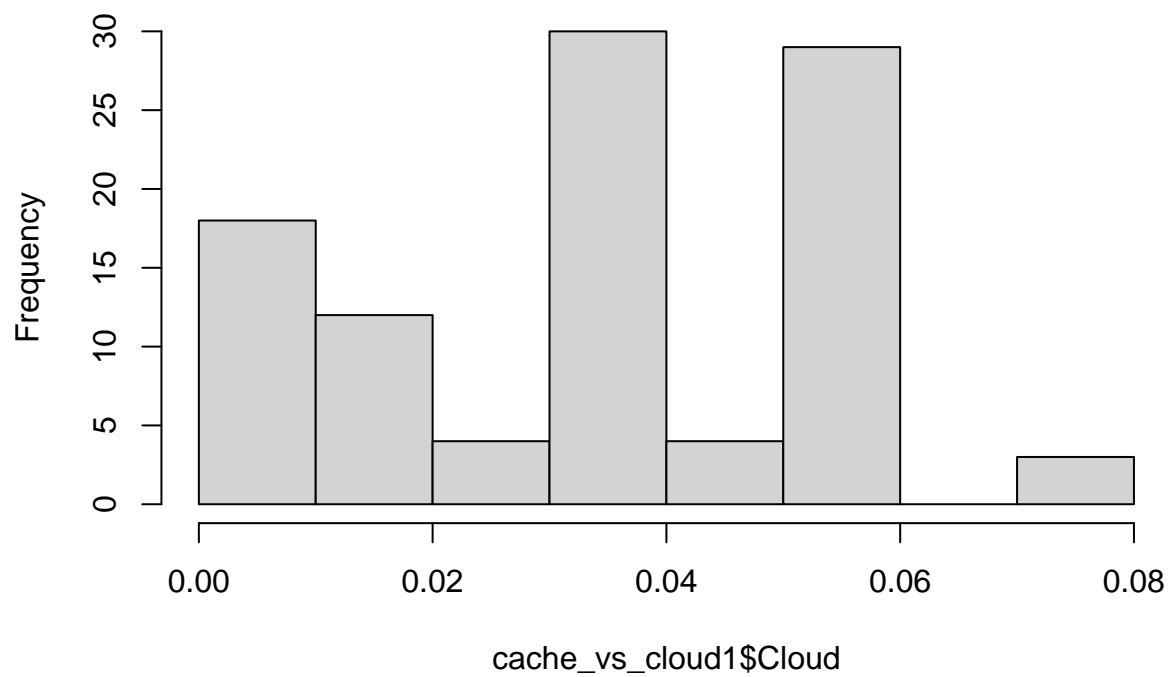


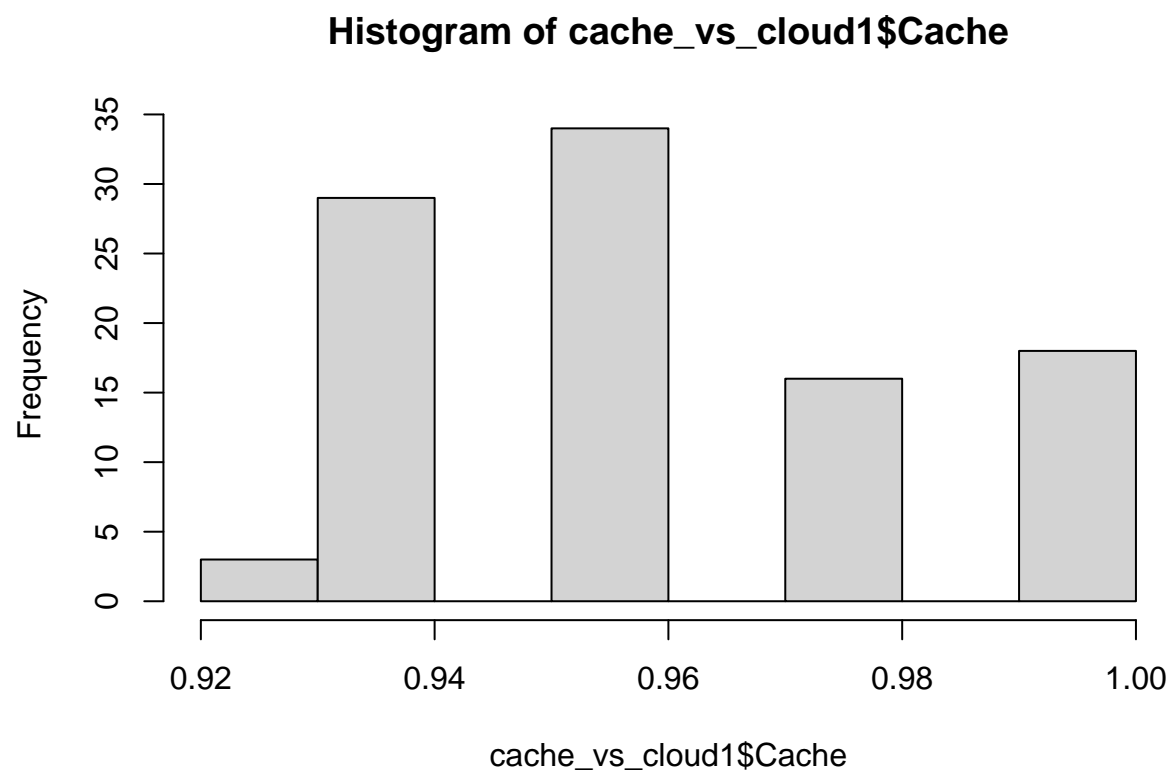




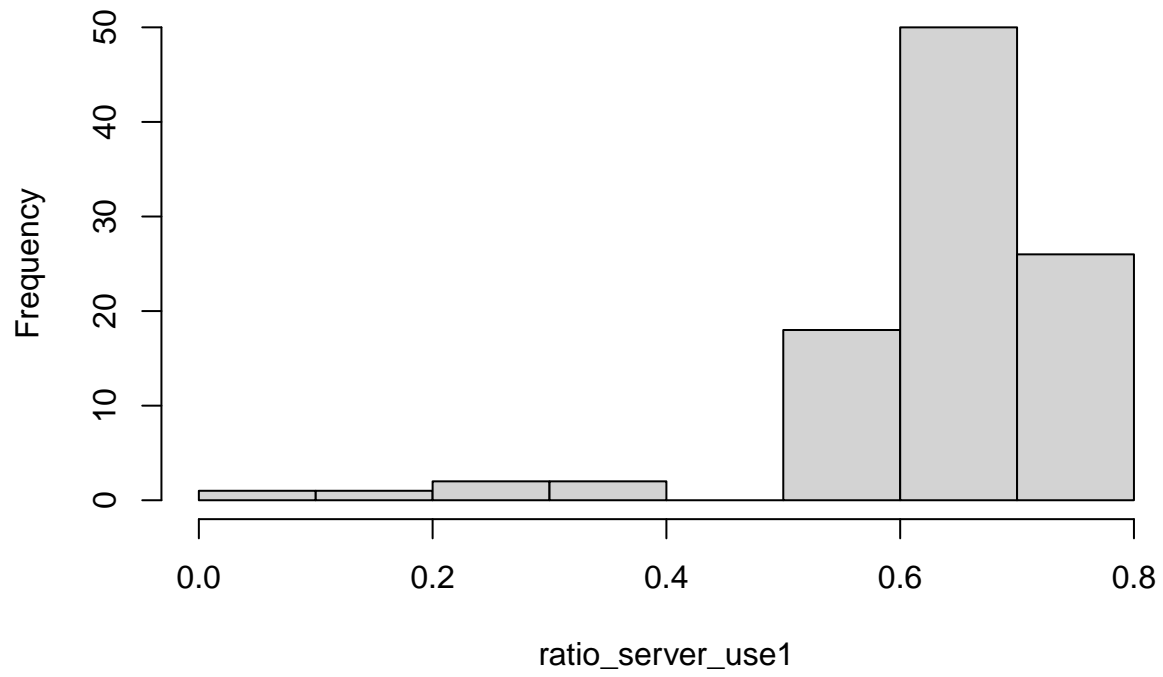


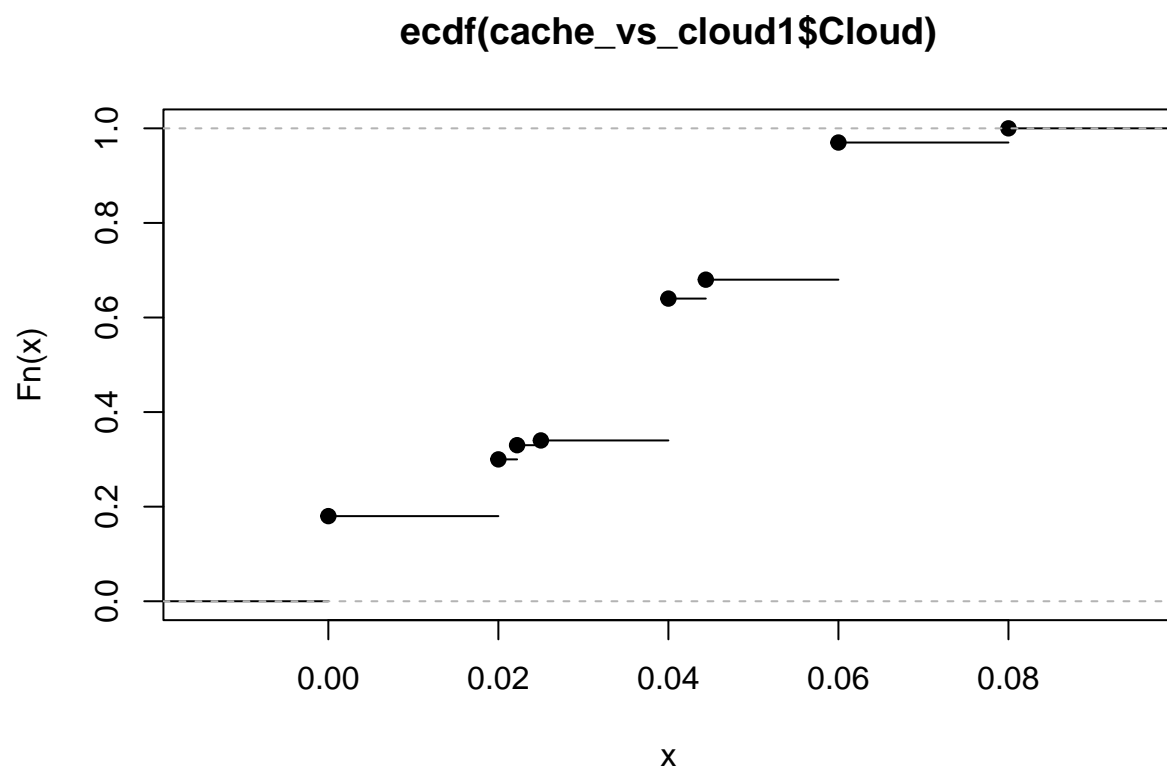
**Histogram of cache\_vs\_cloud1\$Cloud**

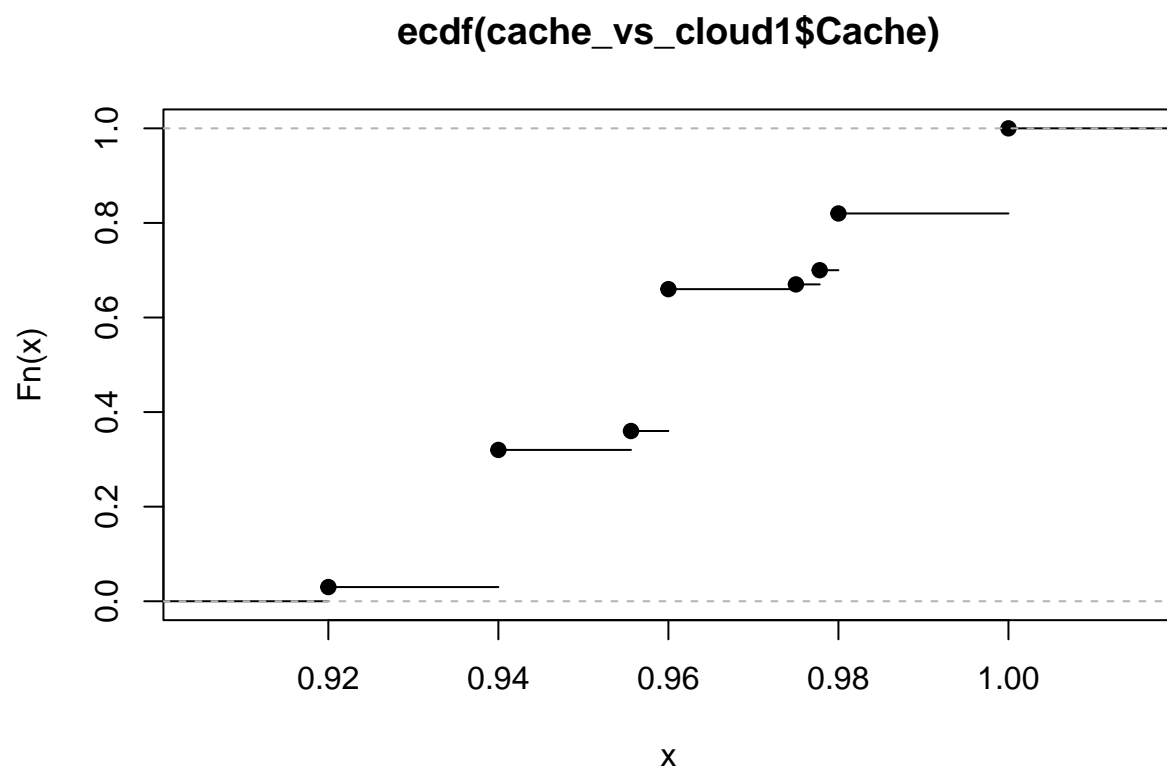




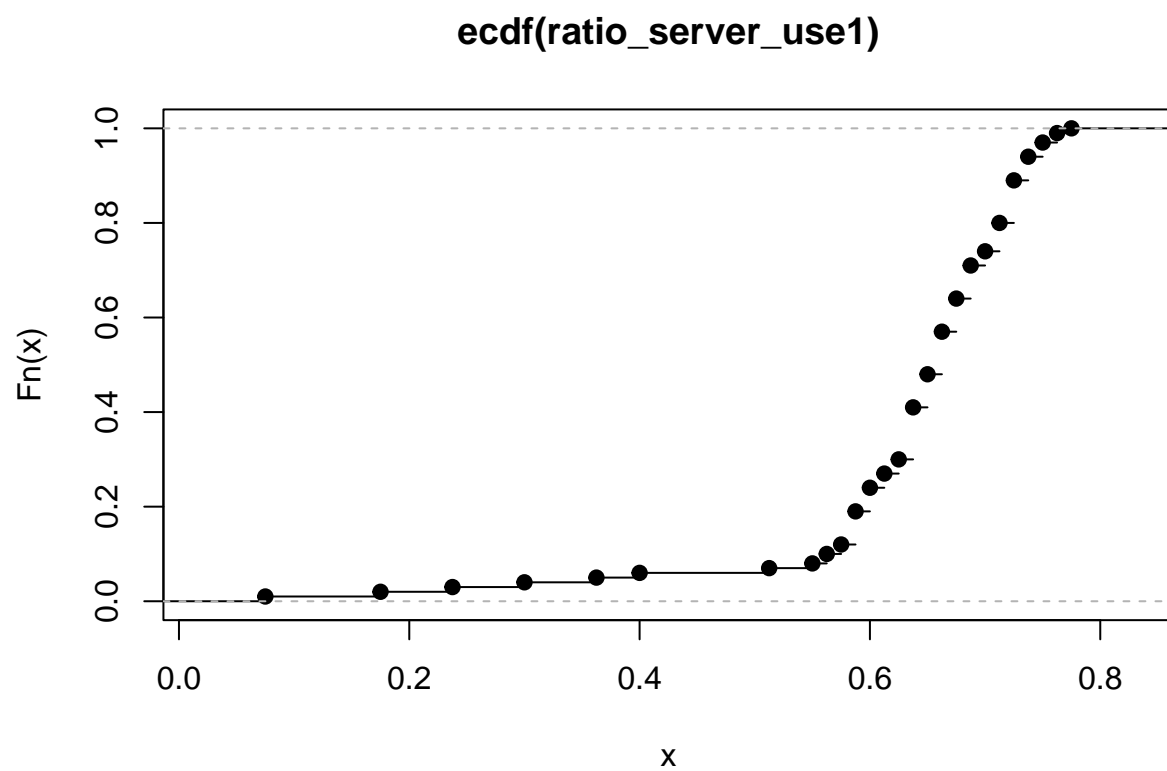
**Histogram of ratio\_server\_use1**



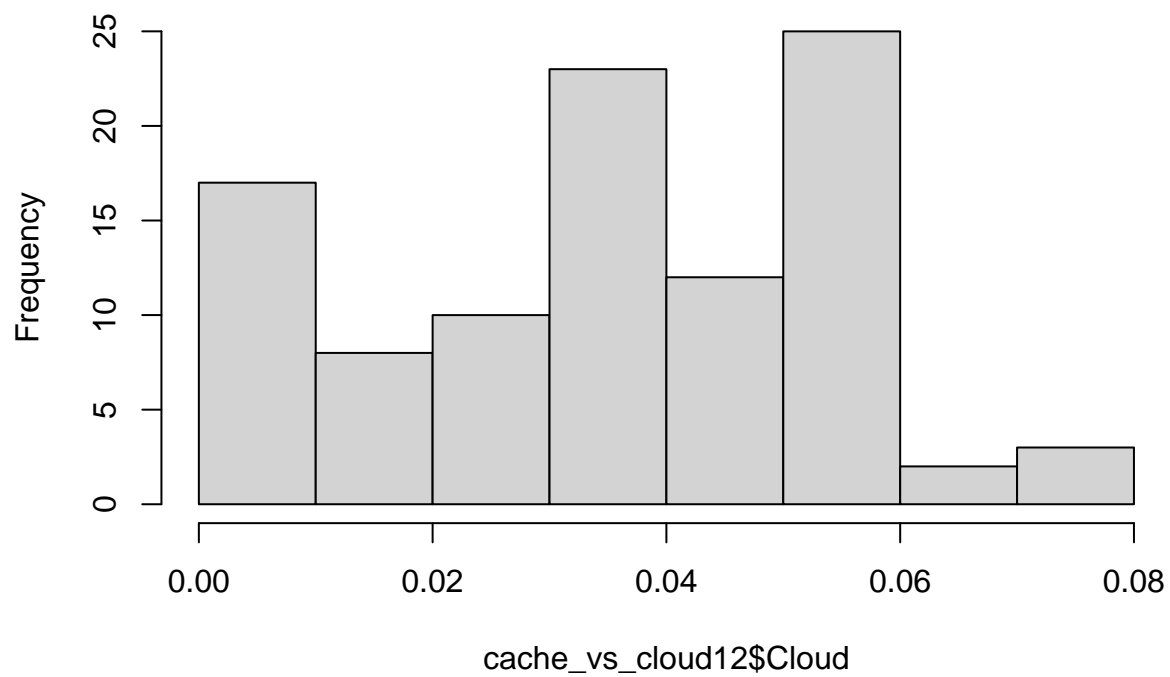


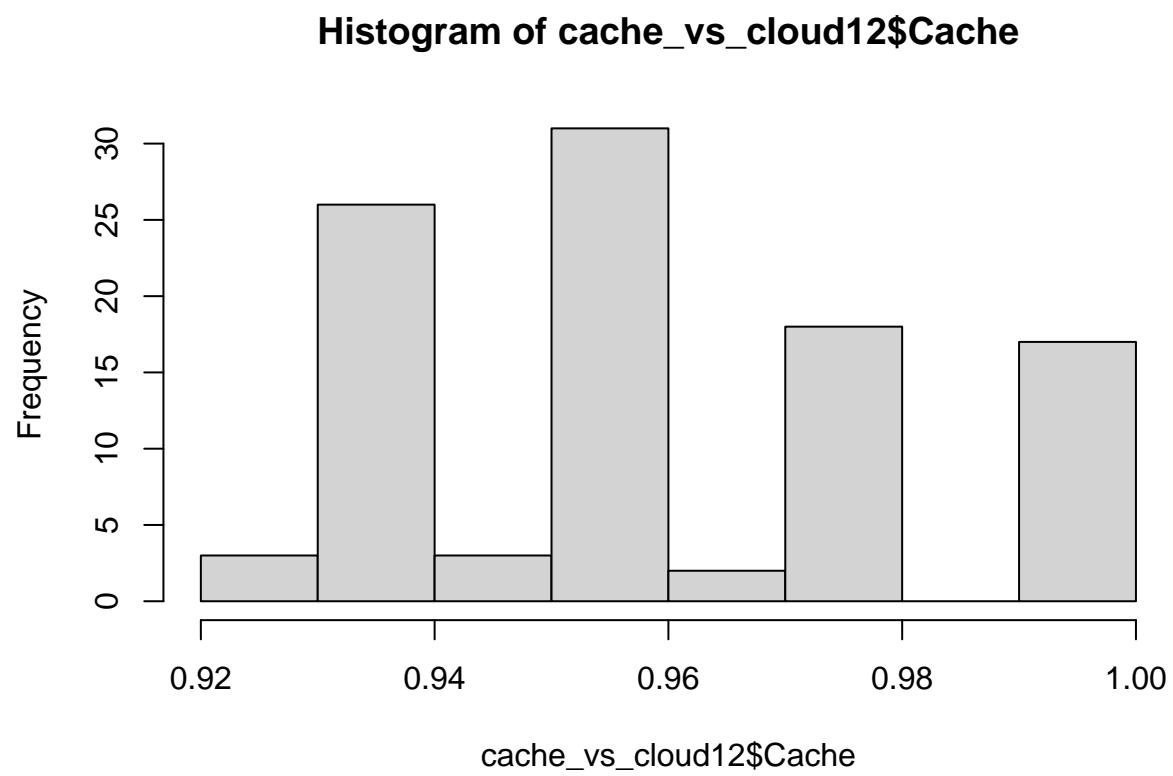




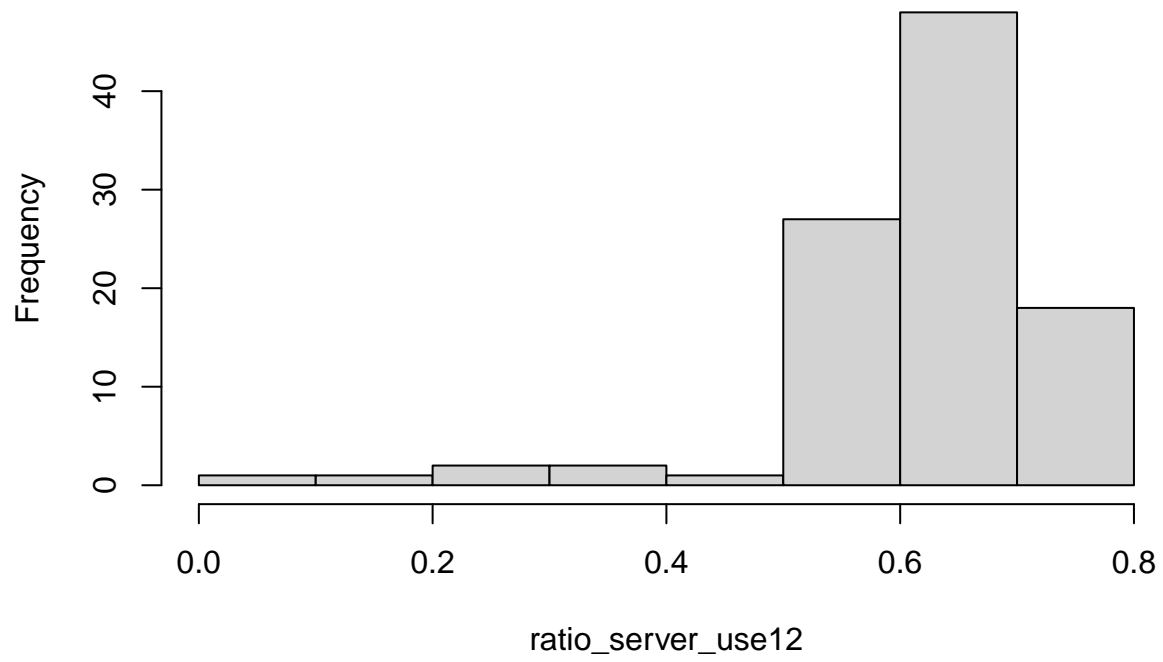


**Histogram of cache\_vs\_cloud12\$Cloud**

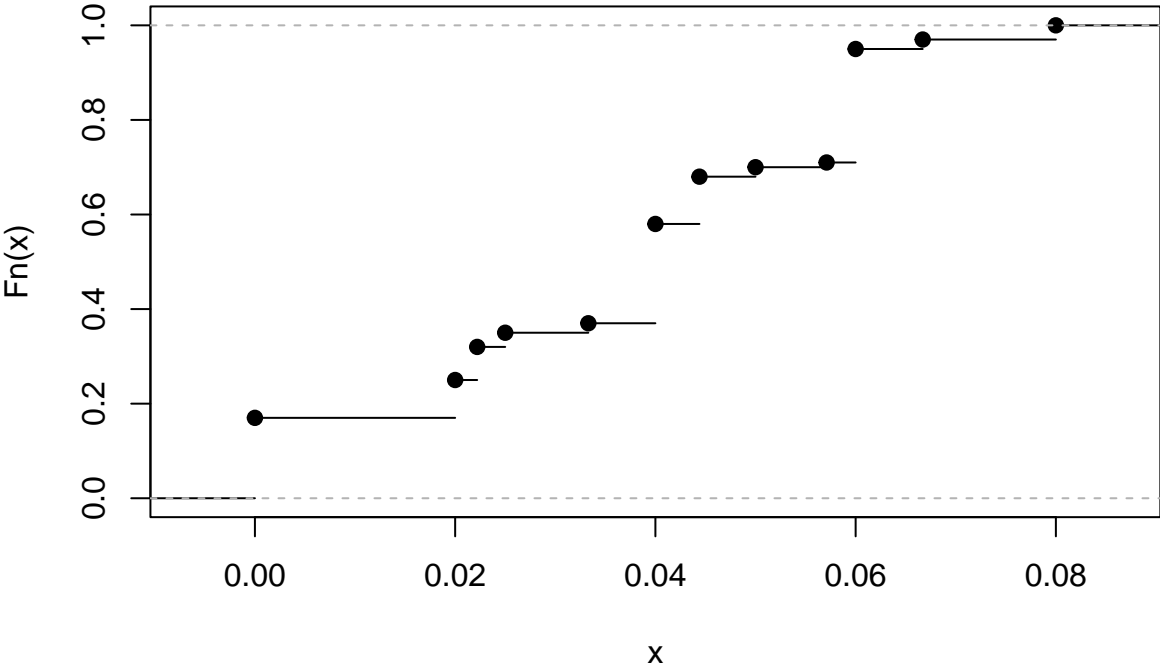




**Histogram of ratio\_server\_use12**



ecdf(cache\_vs\_cloud12\$Cloud)



**ecdf(cache\_vs\_cloud12\$Cache)**

