

R Notebook

```
library(ggplot2)
library(reshape2)
library(dplyr)

loadData <- function(FILE,desc,label1,label2)
{
  d <- read.csv(FILE,header = FALSE)
  if(label2 > label1)
  {
    tmp <- label2
    label2 <- label1
    label1 <- tmp
    tmp <- d[1]
    d[1] <- d[2]
    d[2] <- tmp
  }
  d$TimeStamp <- 1:nrow(d)
  names(d) <- c(paste("Tenant 1 @",label1,"MB/s"), paste("Tenant 2 @",label2,"MB/s"),"Timestamp")
  d <- melt(d,id.vars=c("Timestamp"))
  names(d) <- c("Timestamp","Tenant","BW")
  d$desc <- desc
  d$label1 <- label1
  d$label2 <- label2
  return (d)
}

loadData1 <- function(FILE,desc,label1)
{
  d <- read.csv(FILE,header = FALSE)
  d$TimeStamp <- 1:nrow(d)
  names(d) <- c("Tenant 1", "Timestamp")
  d <- melt(d,id.vars=c("Timestamp"))
  names(d) <- c("Timestamp","Tenant","BW")
  d$desc <- desc
  return (d)
}

draw1 <- function(dades)
{
  ggplot(dades)+geom_line(aes(x=TimeStamp,y=BW,colour=Tenant,linetype=Tenant))+theme_bw(base_size = 14)
}

drawsmooth <- function(dades)
{
  ggplot(dades)+geom_smooth(aes(x=TimeStamp,y=BW,colour=Tenant,linetype=Tenant), degree=0,
    span=0.05, se=FALSE)+theme_bw(base_size = 14)+labs(title=(dades$desc))+theme( legend.position =
  )
}

draw2 <- function(dades)
{
  ggplot(dades)+geom_boxplot(aes(x=Tenant,y=BW))+theme_bw()+labs(title=(dades$desc))
}

draw3 <- function(dades)
```

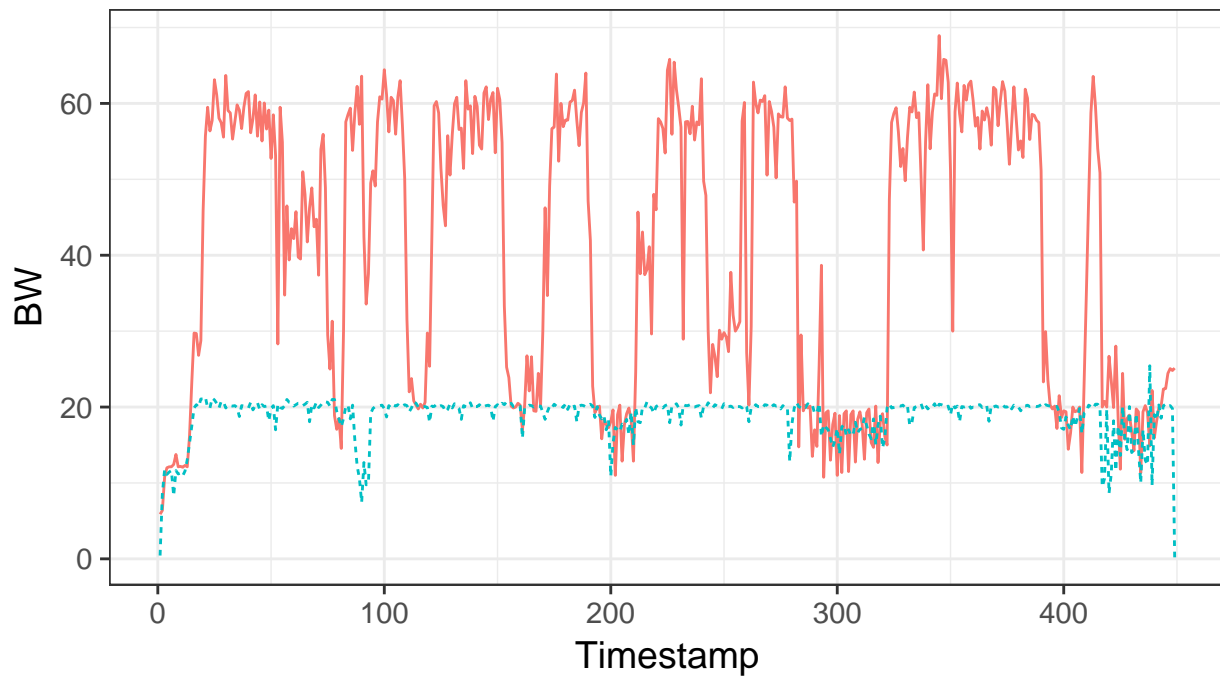
```
{
  ggplot(dades)+geom_violin(aes(x=Tenant,y=BW),draw_quantiles = c(0.5))+theme_bw()+labs(title=(dades$de
})

draw4 <- function(dades)
{
  ggplot(dades,aes(colour=Tenant,x=BW,linetype=Tenant))+ stat_ecdf(geom = "step")+geom_vline(xintercept:
}

URV10020 <- loadData("../log1/log1.csv","URV 100 / 20", 100, 20)
draw1(URV10020)
```

URV 100 / 20

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



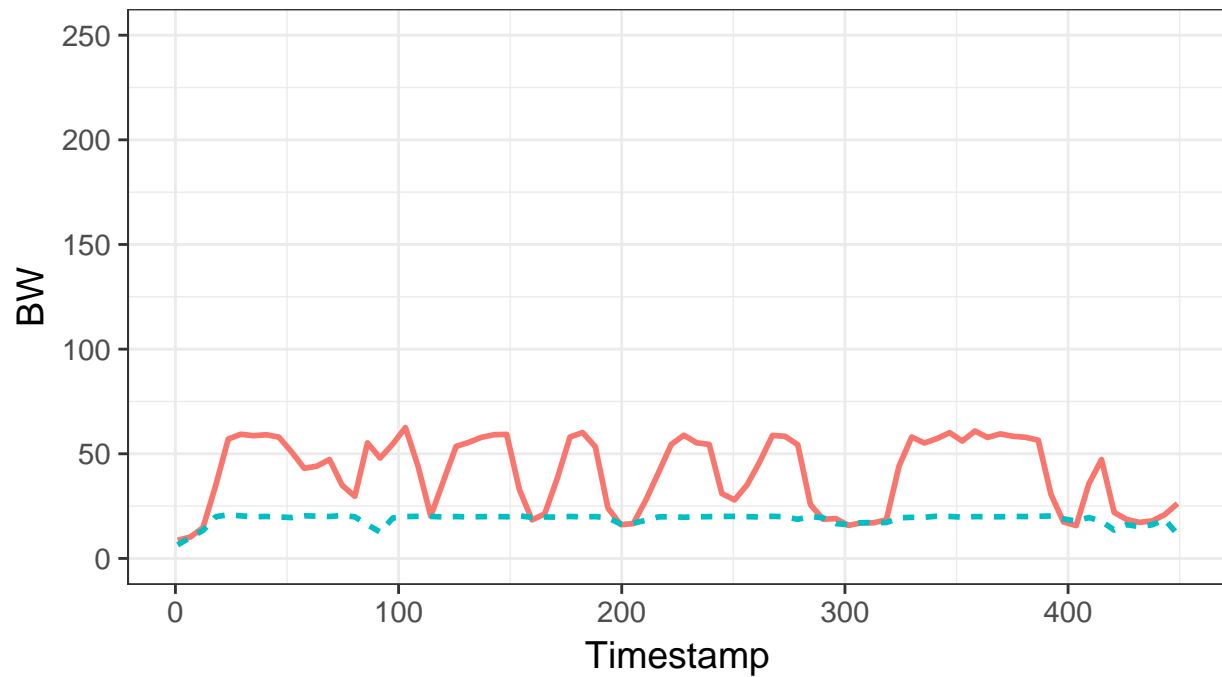
```
drawsmooth(URV10020)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

URV 100 / 20

Tenant — Tenant 1 @ 100 MB/s - - Tenant 2 @ 20 MB/s



```
pdf(file="URV100_20_Timeline.pdf",width = 7, height= 5)
drawsmooth(URV10020)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

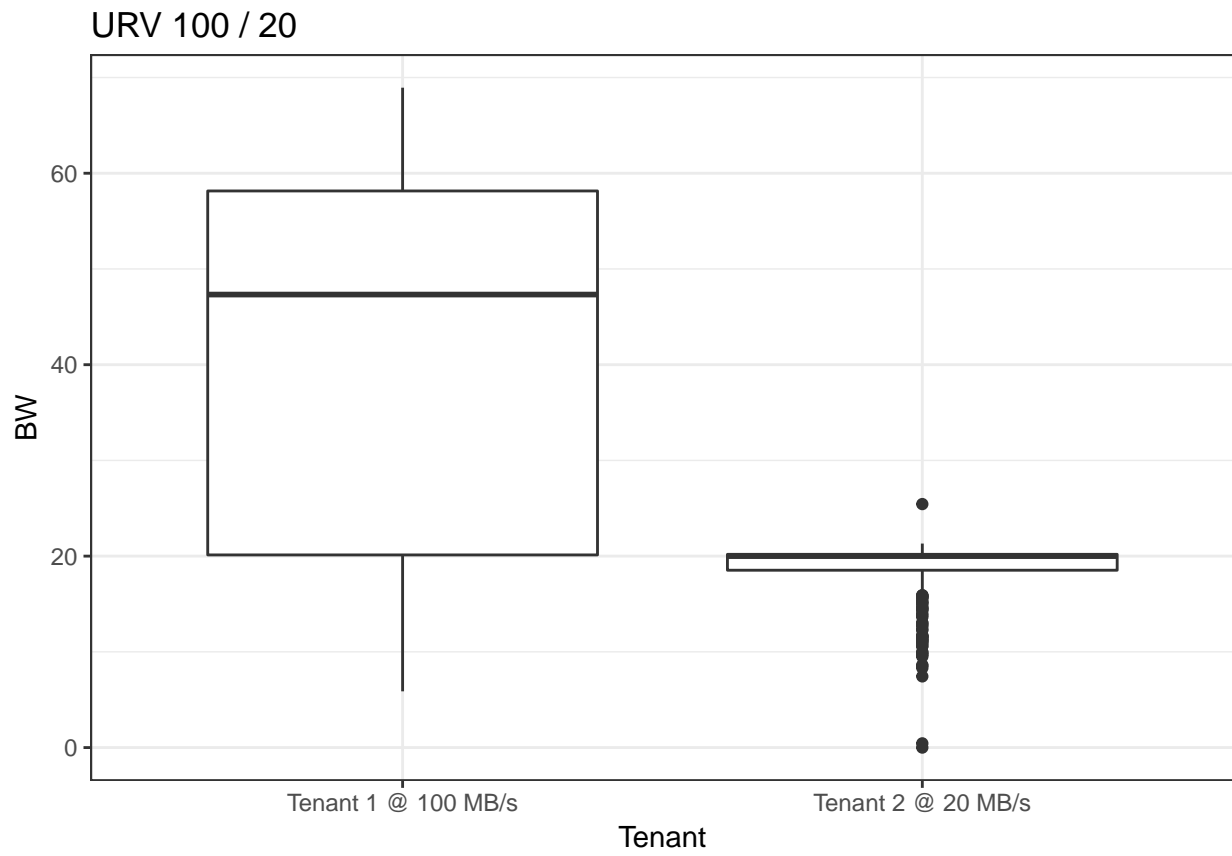
```
## `geom_smooth()` using method = 'loess'
```

```
dev.off()
```

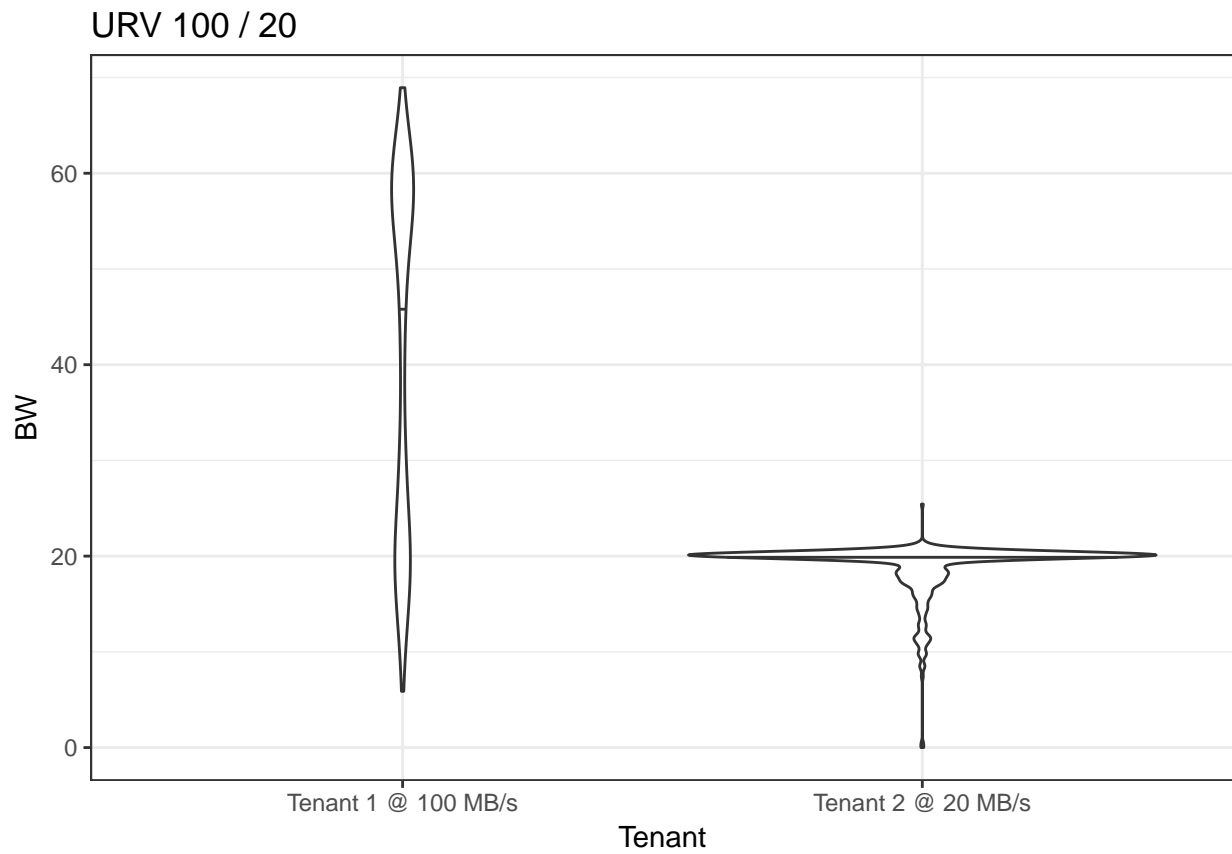
```
## pdf
```

```
## 2
```

```
draw2(URV10020)
```



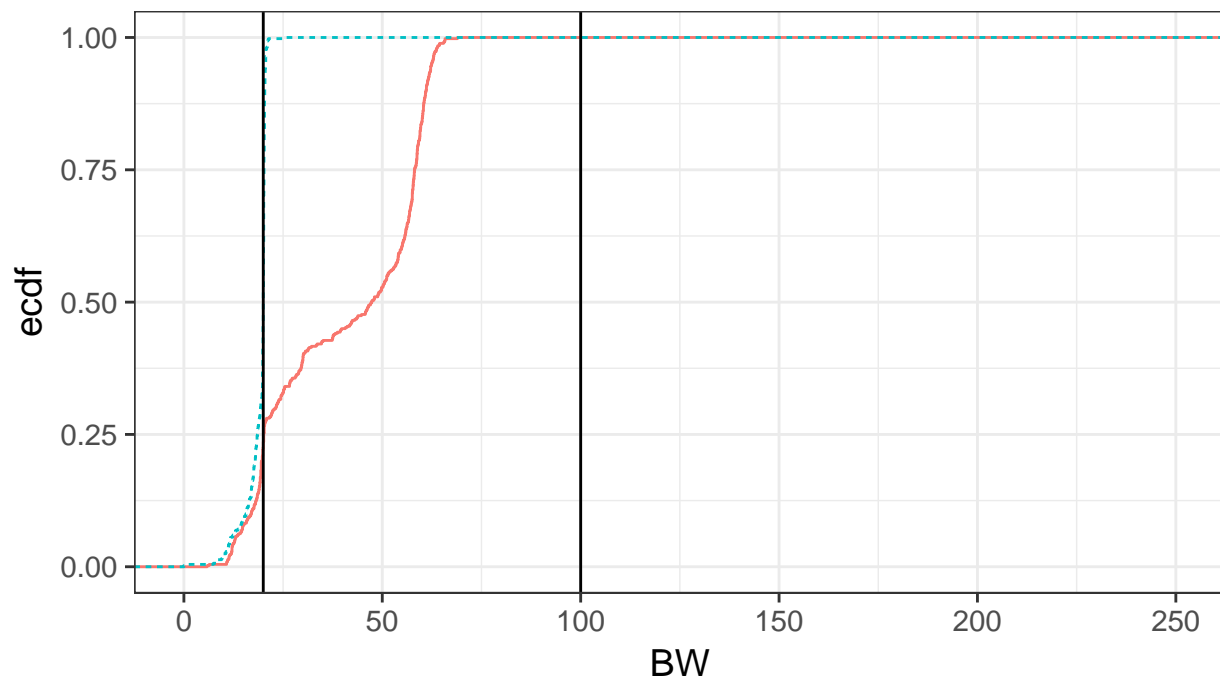
`draw3(URV10020)`



```
draw4(URV10020)+scale_x_continuous(limits=c(0,250))
```

URV 100 / 20

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="URV100_20_ECDF.pdf",width = 7, height= 5)
draw4(URV10020)+scale_x_continuous(limits=c(0,250))
dev.off()
```

```
## pdf
## 2
```

```
summaryBy(~Tenant,URV10020,id = ~Timestamp,FUN = c(quantile))
```

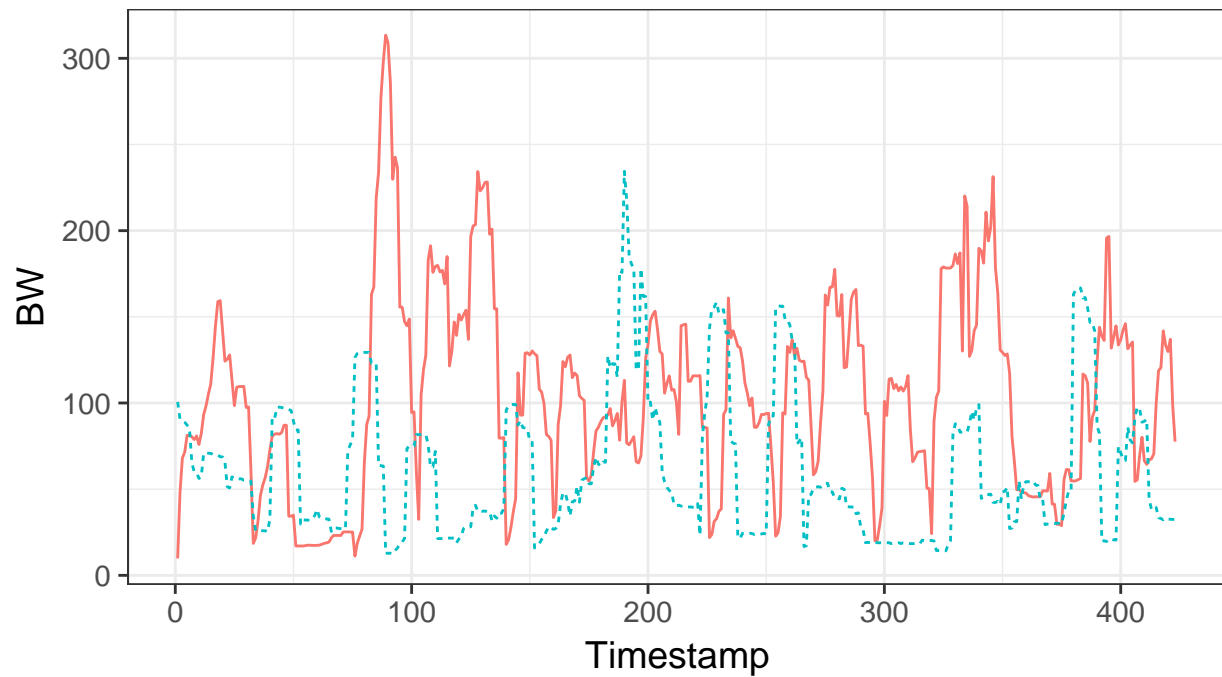
```
##           Tenant BW.0%  BW.25%  BW.50%  BW.75% BW.100% label1.0%
## 1 Tenant 1 @ 100 MB/s 5.875 20.12500 47.32617 58.15039 68.9375      100
## 2 Tenant 2 @ 20 MB/s 0.000 18.52539 20.00000 20.18750 25.4375      100
##  label1.25% label1.50% label1.75% label1.100% label2.0% label2.25%
## 1         100         100         100         100         20         20
## 2         100         100         100         100         20         20
##  label2.50% label2.75% label2.100% Timestamp
## 1         20         20         20         1
## 2         20         20         20         1
```

```
dades <- loadData("../log14/log14.csv","BSC 100 / 20",100,20)
draw1(dades)
```

```
## Warning: Removed 1 rows containing missing values (geom_path).
```

BSC 100 / 20

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



```
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

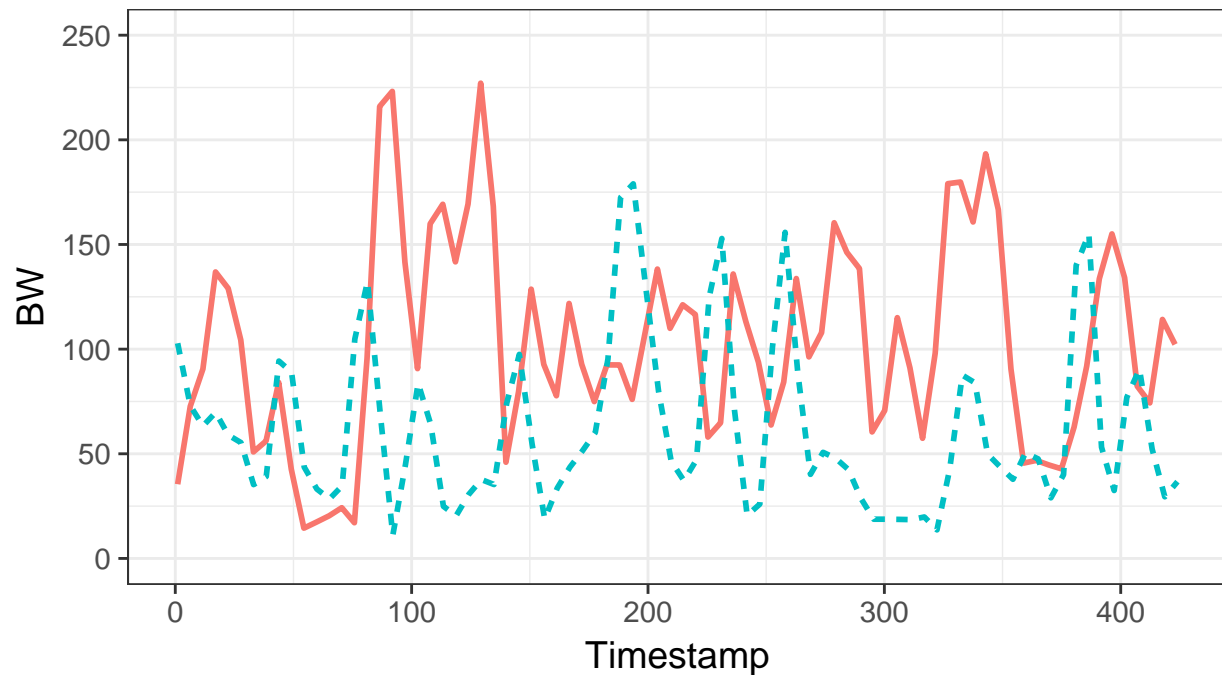
```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```

BSC 100 / 20

Tenant — Tenant 1 @ 100 MB/s - - Tenant 2 @ 20 MB/s



```
pdf(file="BSC100_20_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```

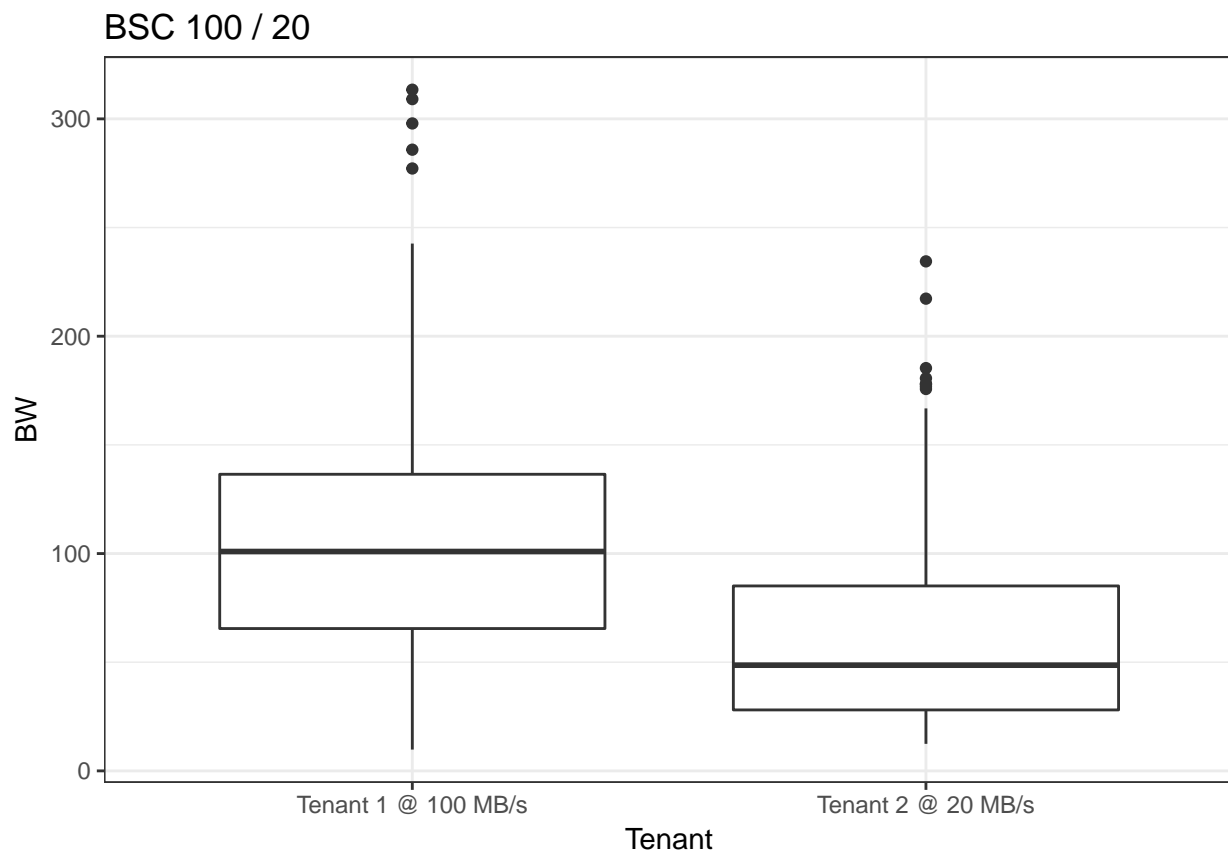
```
dev.off()
```

```
## pdf
```

```
## 2
```

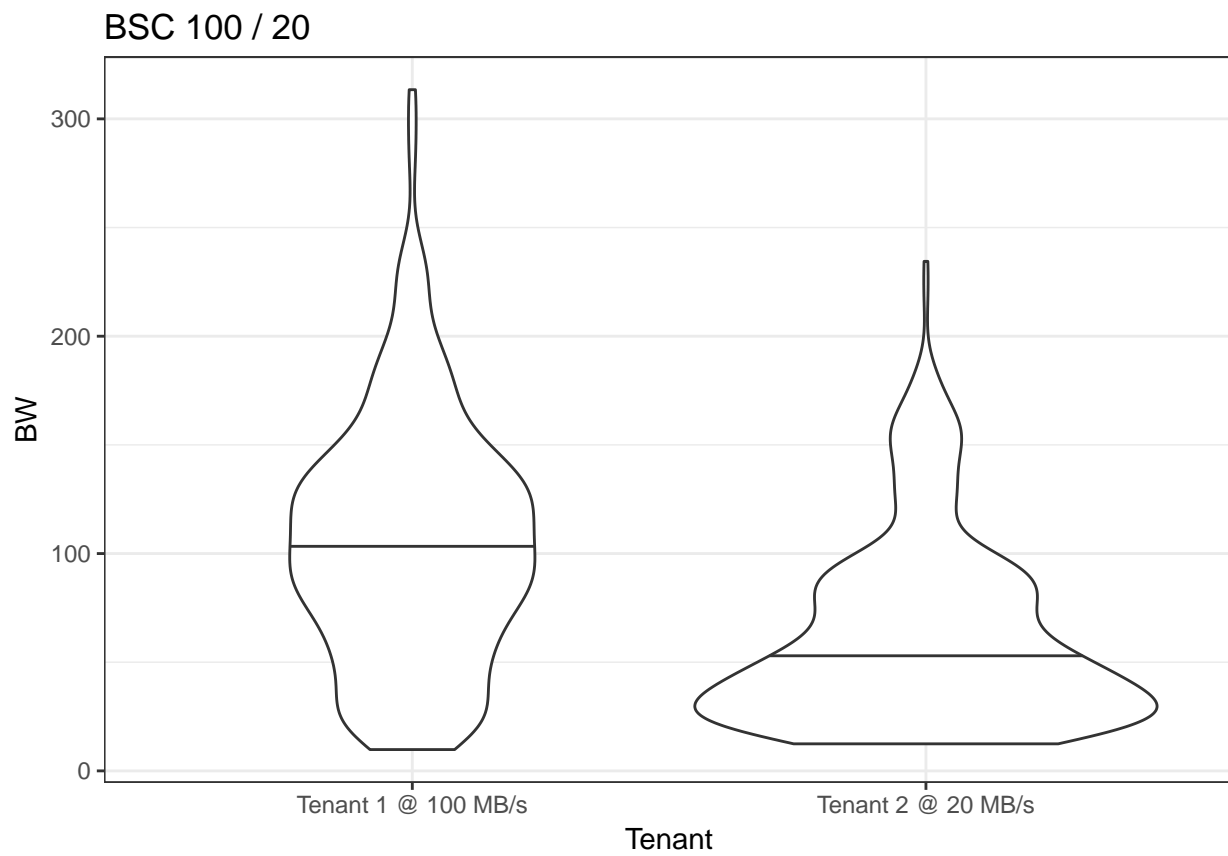
```
draw2(dades)
```

```
## Warning: Removed 1 rows containing non-finite values (stat_boxplot).
```

```
draw3(dades)
```

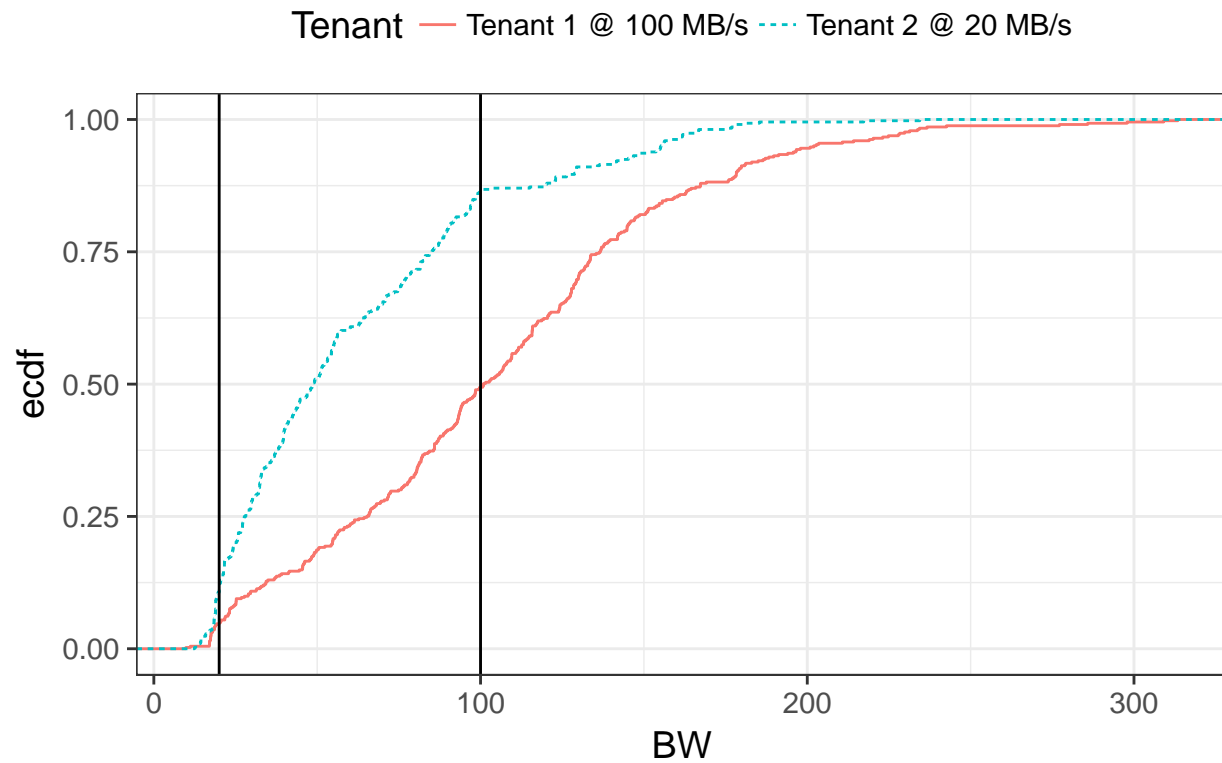
```
## Warning: Removed 1 rows containing non-finite values (stat_ydensity).
```



```
draw4(dades)
```

```
## Warning: Removed 1 rows containing non-finite values (stat_ecdf).
```

BSC 100 / 20



```
pdf(file="BSC100_20_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

```
## Warning: Removed 6 rows containing non-finite values (stat_ecdf).
```

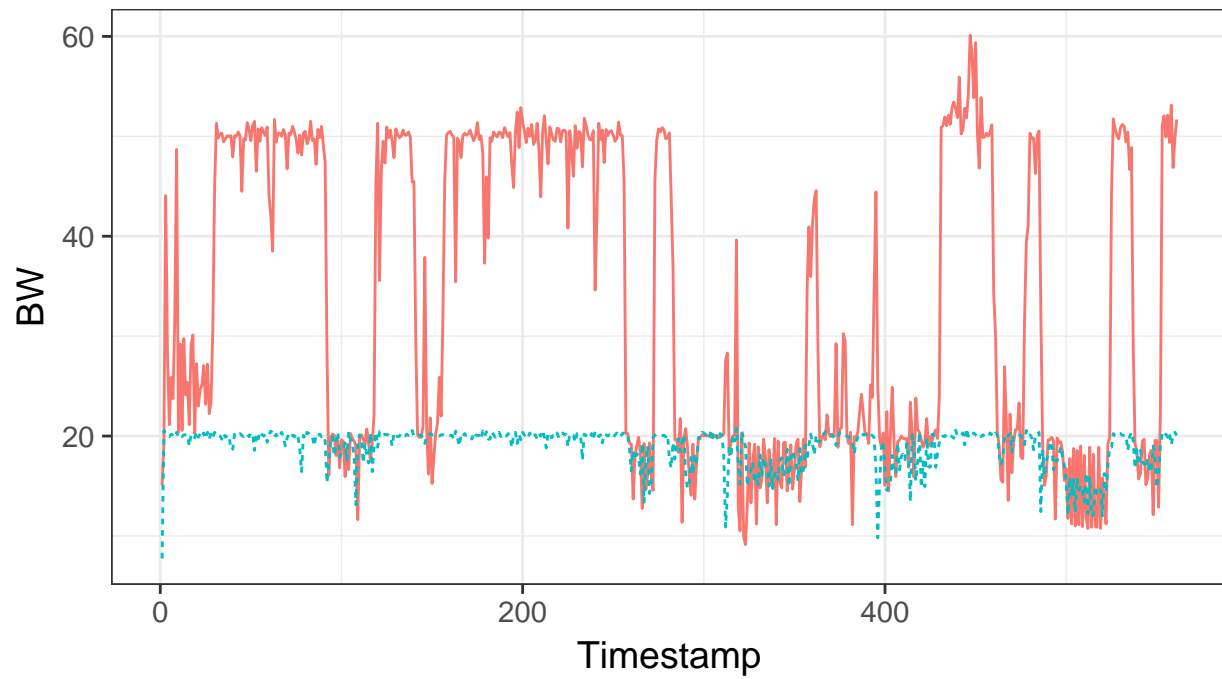
```
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log33/log33.csv","URV 50 / 20",50,20)
draw1(dades)
```

URV 50 / 20

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



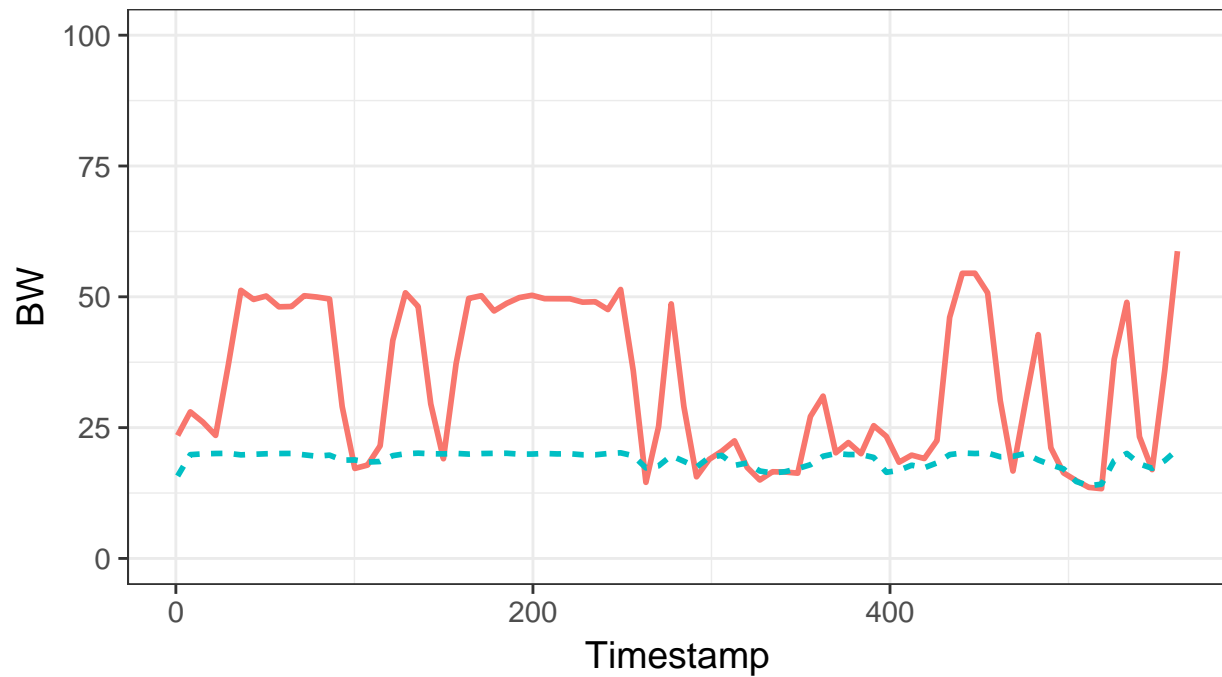
```
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

URV 50 / 20

Tenant — Tenant 1 @ 50 MB/s - - Tenant 2 @ 20 MB/s



```
pdf(file="URV50_20_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

```
## Warning: Ignoring unknown parameters: degree
```

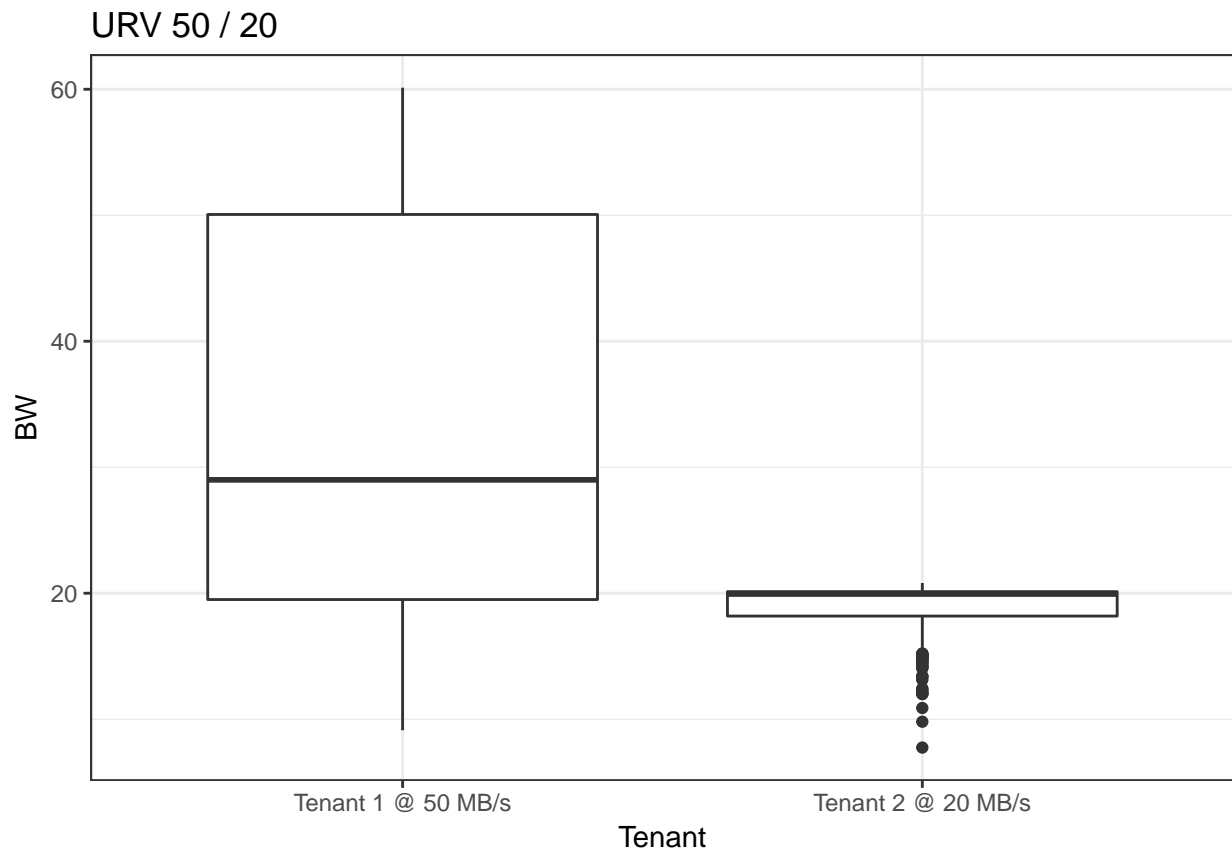
```
## `geom_smooth()` using method = 'loess'
```

```
dev.off()
```

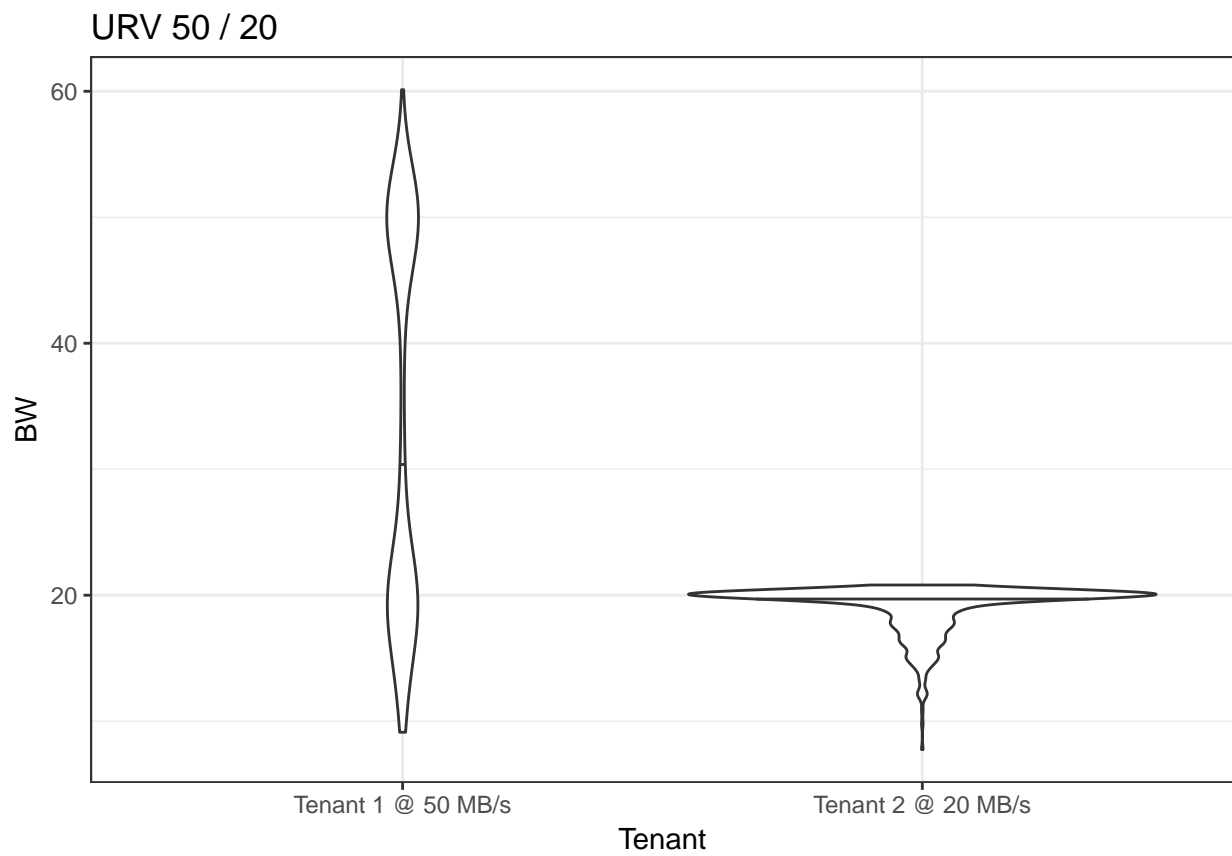
```
## pdf
```

```
## 2
```

```
draw2(dades)
```



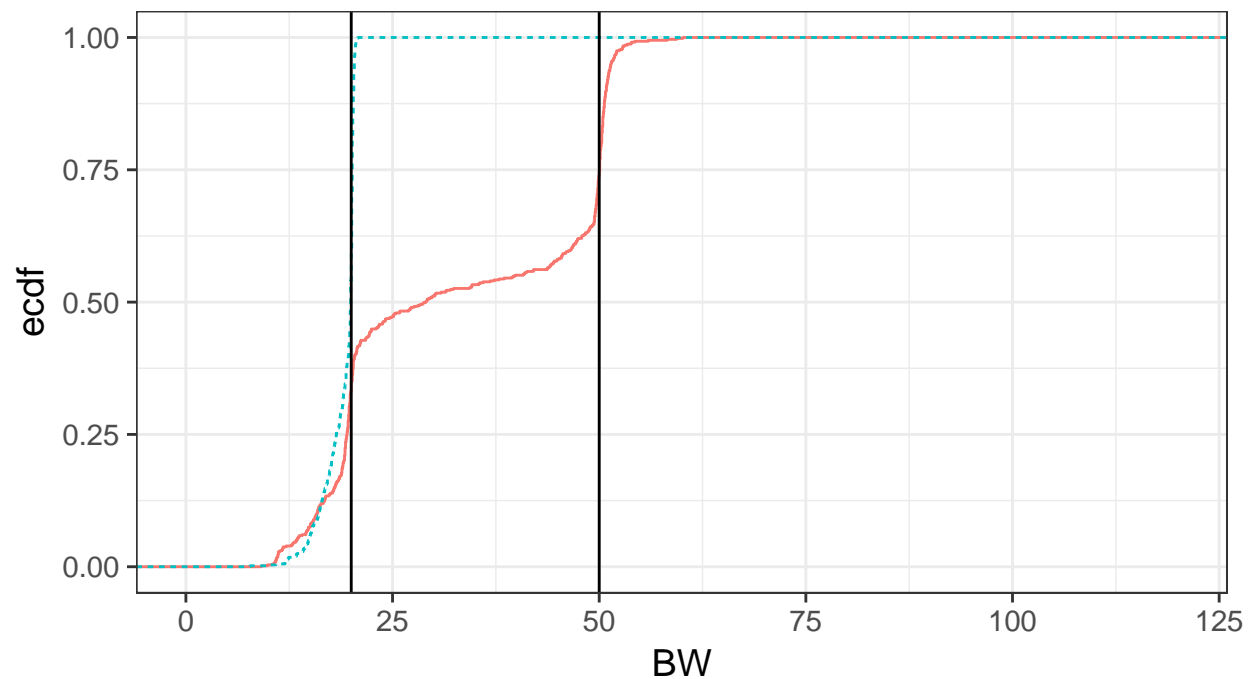
`draw3(dades)`



```
draw4(dades)+scale_x_continuous(limits=c(0,120))
```

URV 50 / 20

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="URV50_20_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,120))
dev.off()
```

```
## pdf
## 2
```

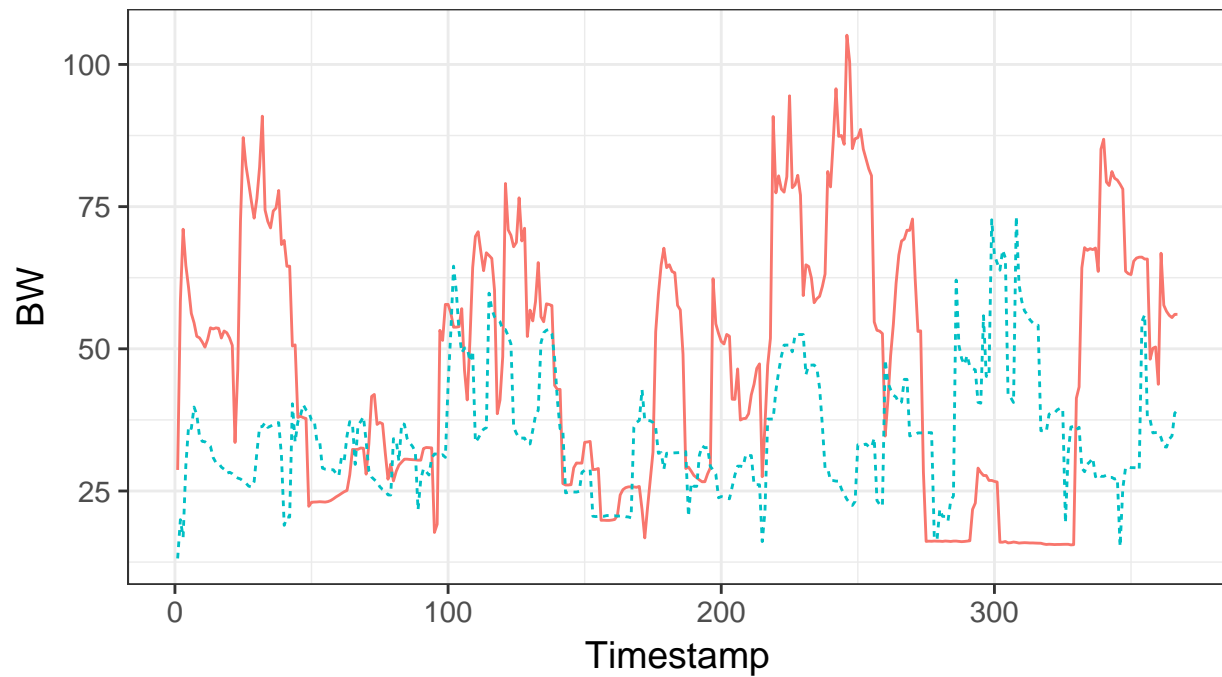
```
summaryBy(~Tenant,URV10020,id = ~Timestamp,FUN = c(quantile))
```

```
##          Tenant BW.0%  BW.25%  BW.50%  BW.75% BW.100% label1.0%
## 1 Tenant 1 @ 100 MB/s 5.875 20.12500 47.32617 58.15039 68.9375      100
## 2 Tenant 2 @ 20 MB/s 0.000 18.52539 20.00000 20.18750 25.4375      100
##  label1.25% label1.50% label1.75% label1.100% label2.0% label2.25%
## 1          100          100          100          100          20          20
## 2          100          100          100          100          20          20
##  label2.50% label2.75% label2.100% Timestamp
## 1          20          20          20          1
## 2          20          20          20          1
```

```
dades <- loadData("../log27/log27.csv","BSC 50 / 20",20,50)
draw1(dades)
```


BSC 50 / 20

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

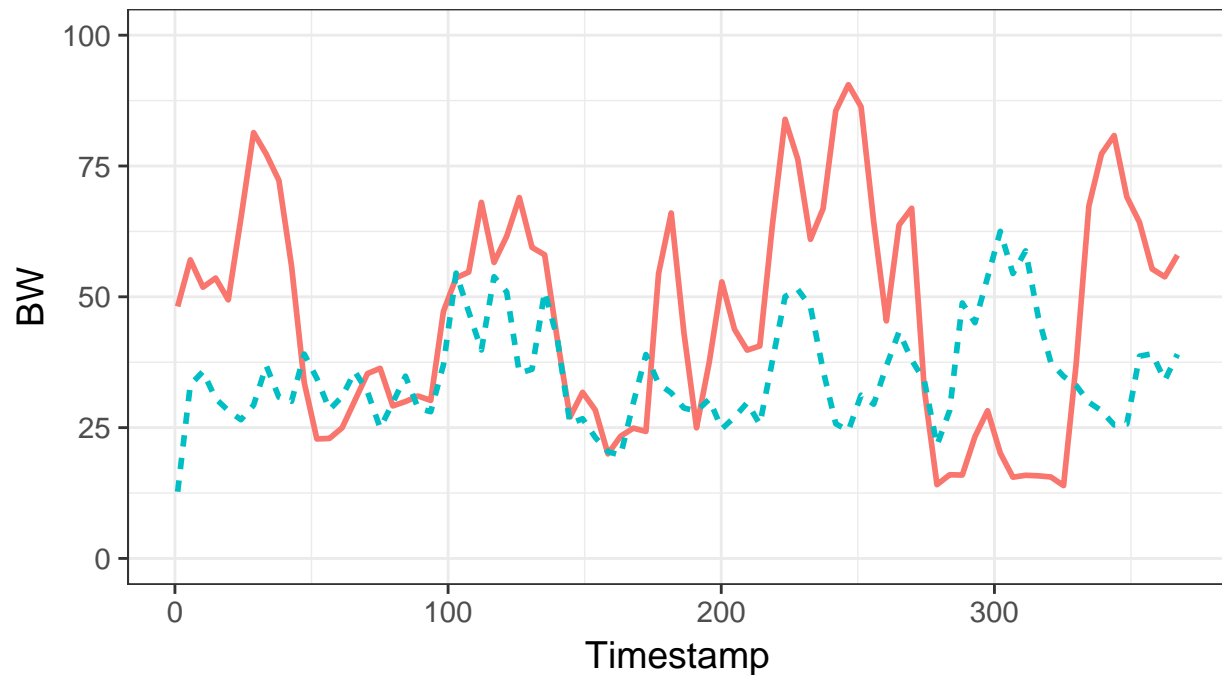
```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```

BSC 50 / 20

Tenant — Tenant 1 @ 50 MB/s - - Tenant 2 @ 20 MB/s



```
pdf(file="BSC50_20_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

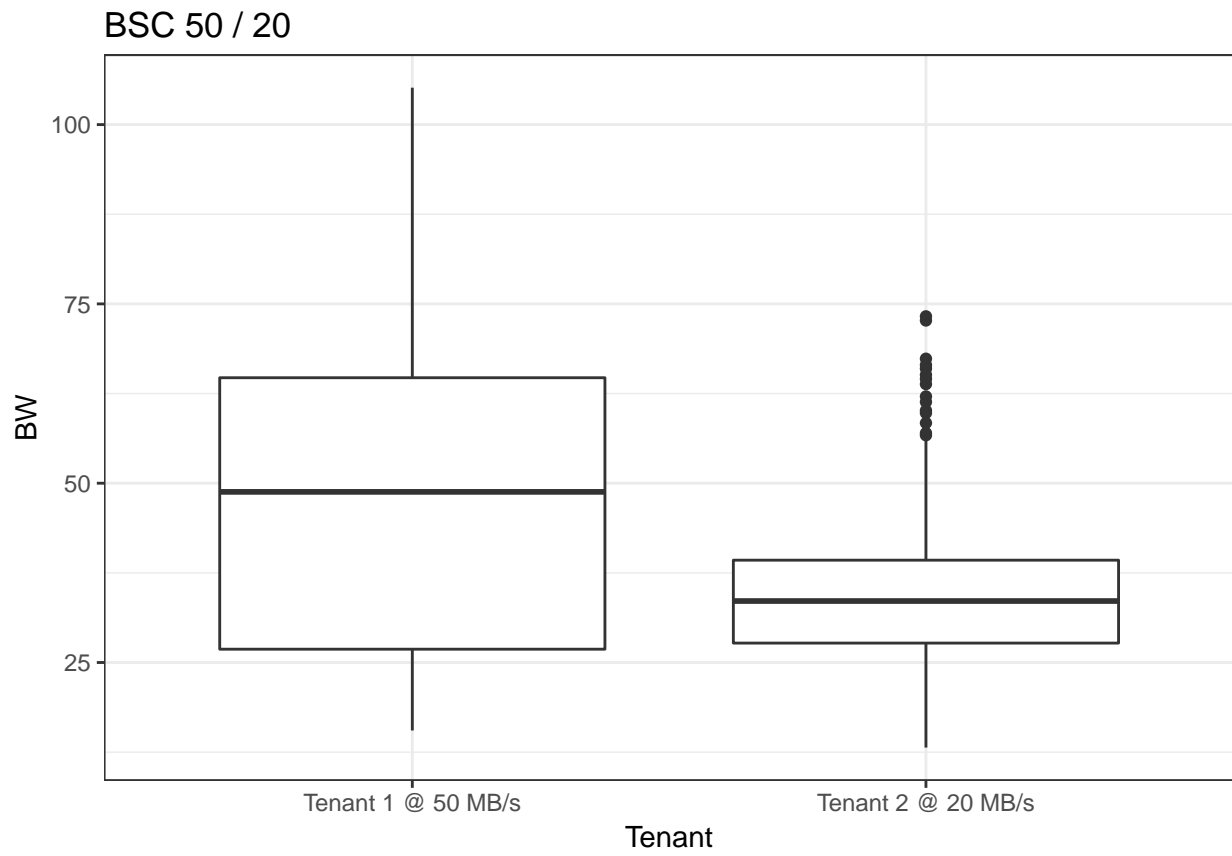
```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```

```
dev.off()
```

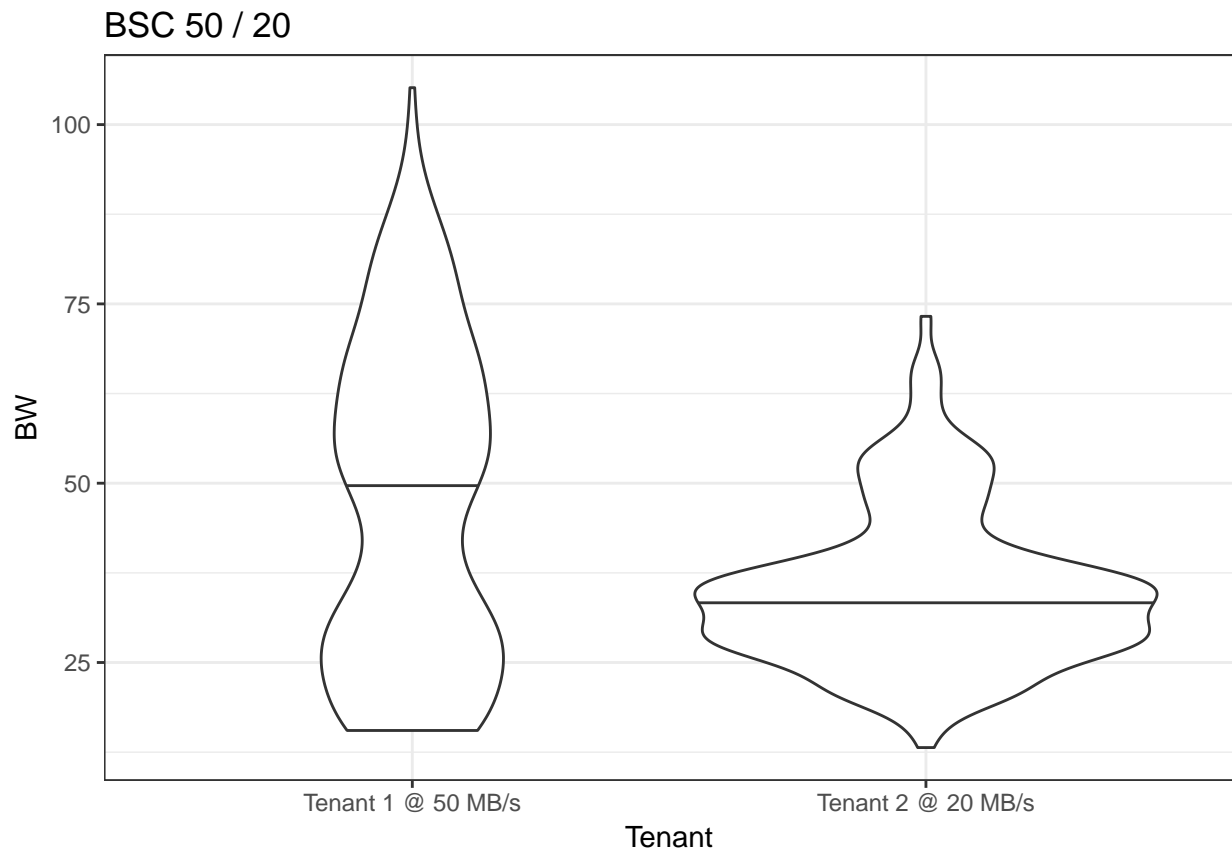
```
## pdf
```

```
## 2
```

```
draw2(dades)
```



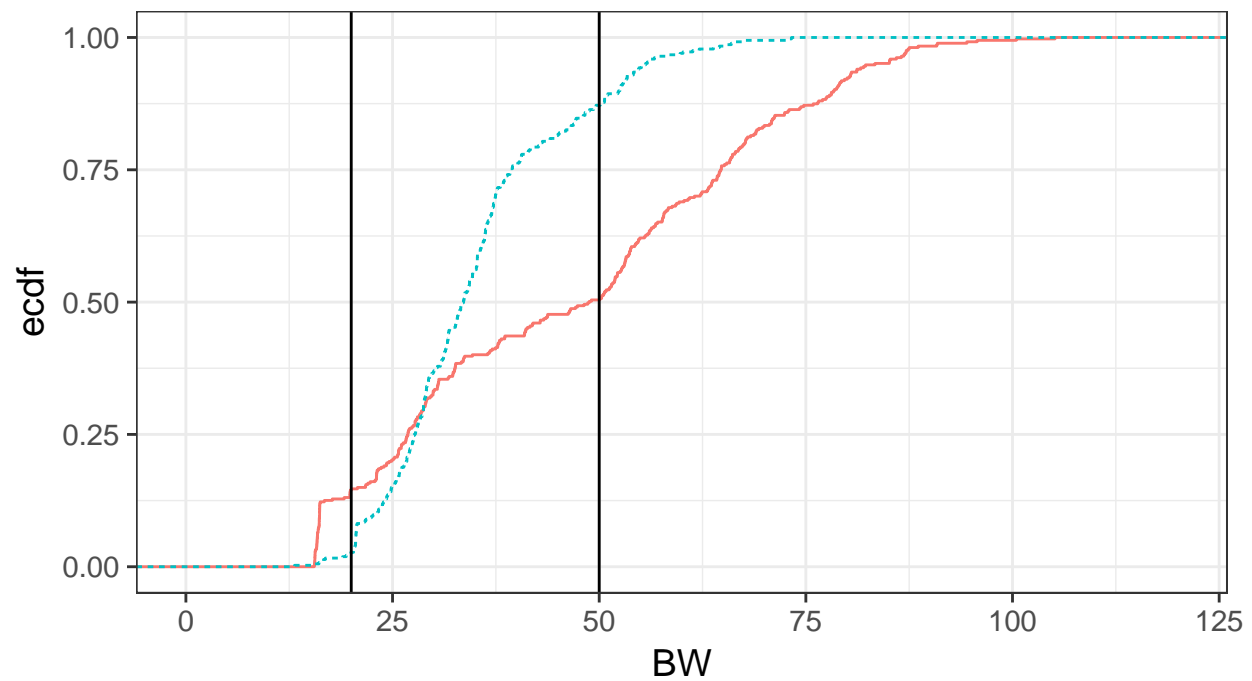
`draw3(dades)`



```
draw4(dades)+scale_x_continuous(limits=c(0,120))
```

BSC 50 / 20

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



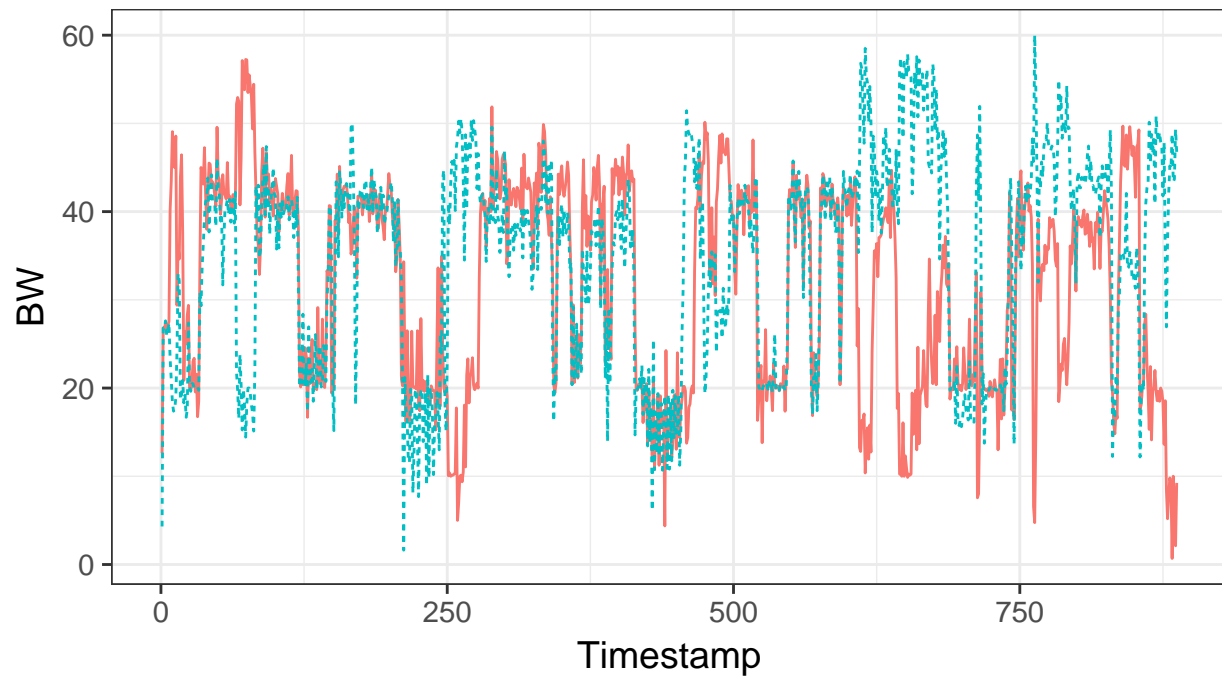
```
pdf(file="BSC50_20_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,120))
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log6/log6.csv","URV 100 / 100",100,100)
draw1(dades)
```

URV 100 / 100

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 100 MB/s



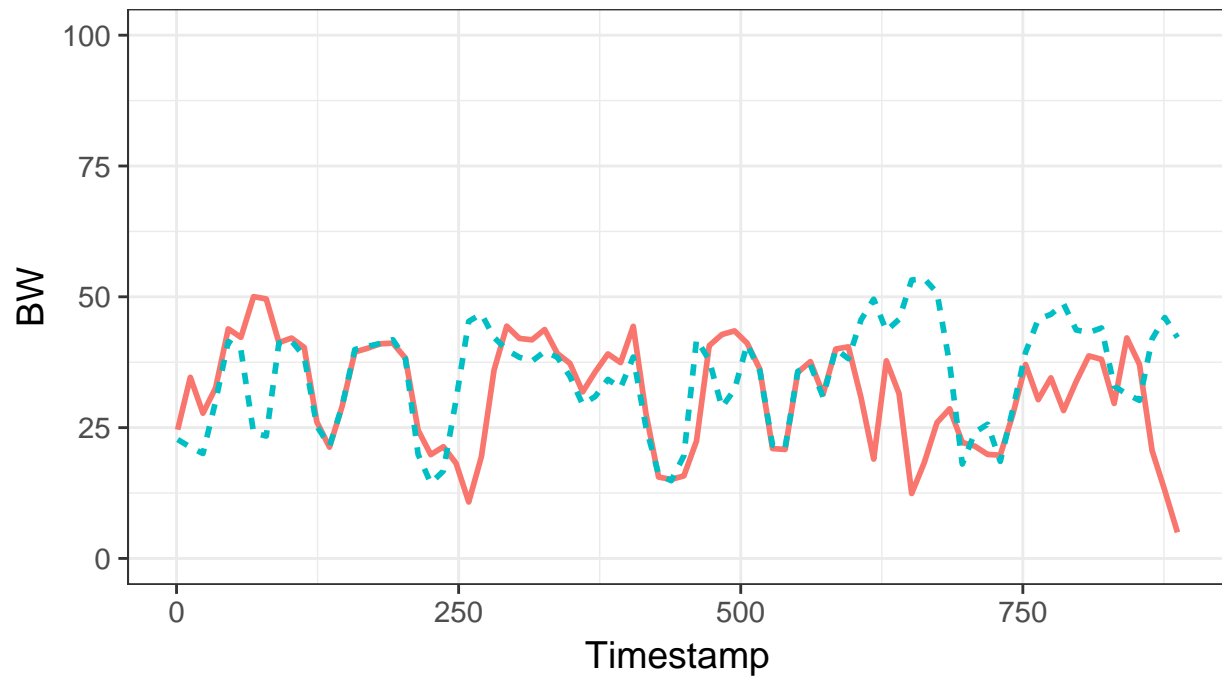
```
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

URV 100 / 100

Tenant — Tenant 1 @ 100 MB/s - - Tenant 2 @ 100 MB/s



```
pdf(file="URV100_100_Timeline.pdf",width = 7, height= 5)  
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

```
## Warning: Ignoring unknown parameters: degree
```

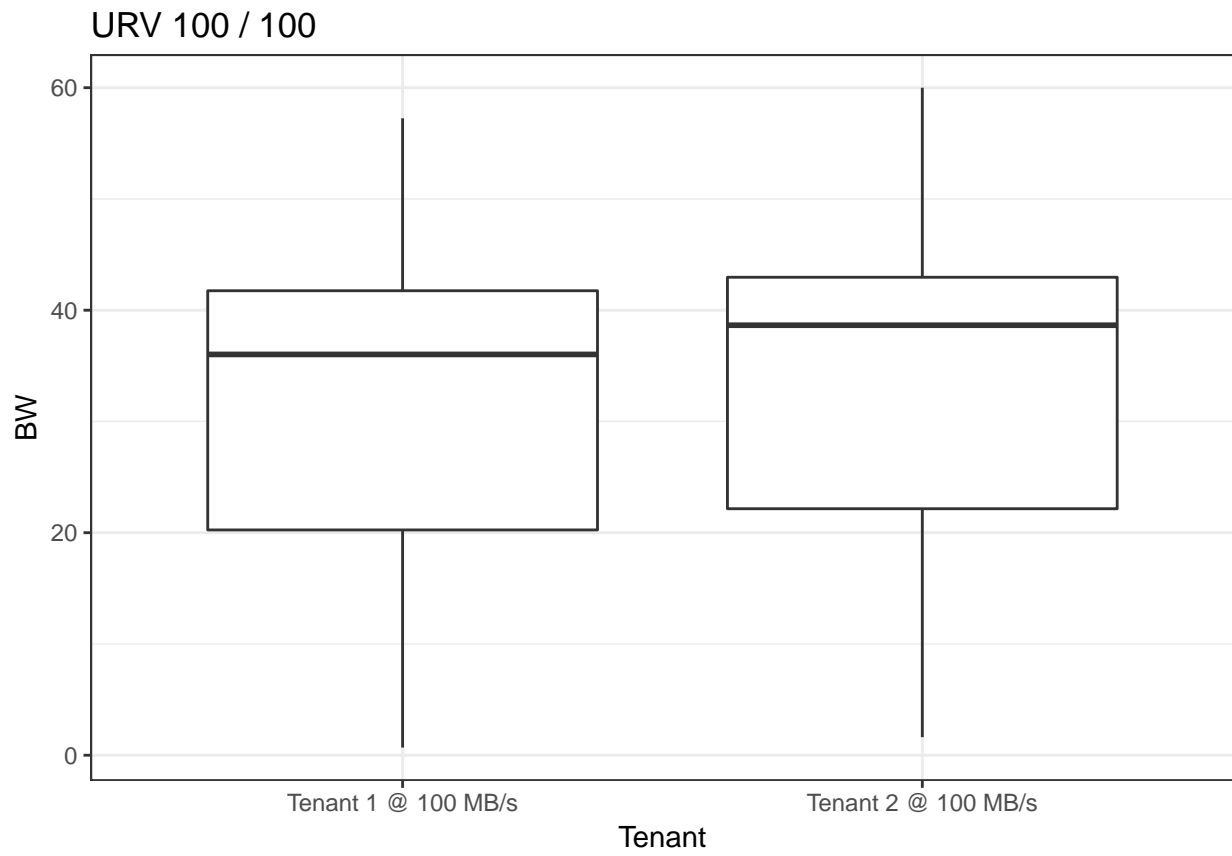
```
## `geom_smooth()` using method = 'loess'
```

```
dev.off()
```

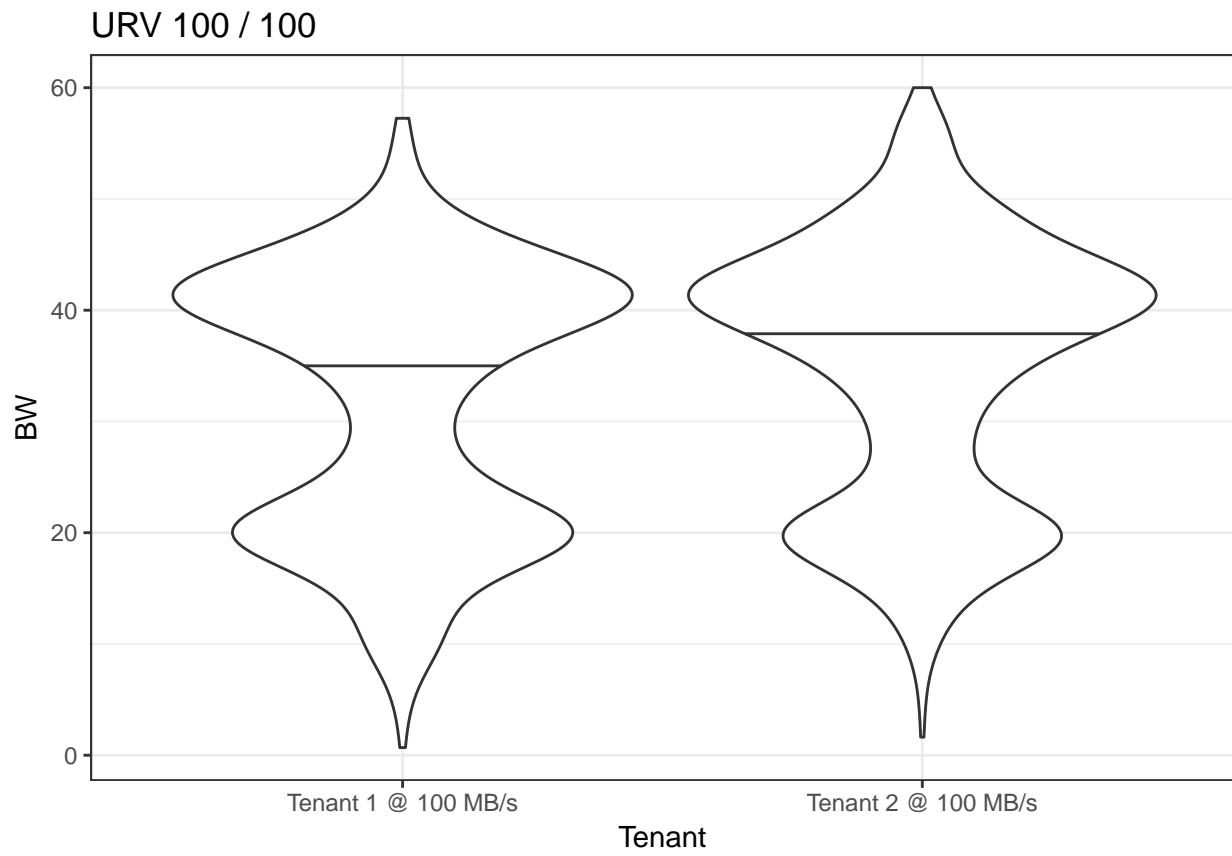
```
## pdf
```

```
## 2
```

```
draw2(dades)
```



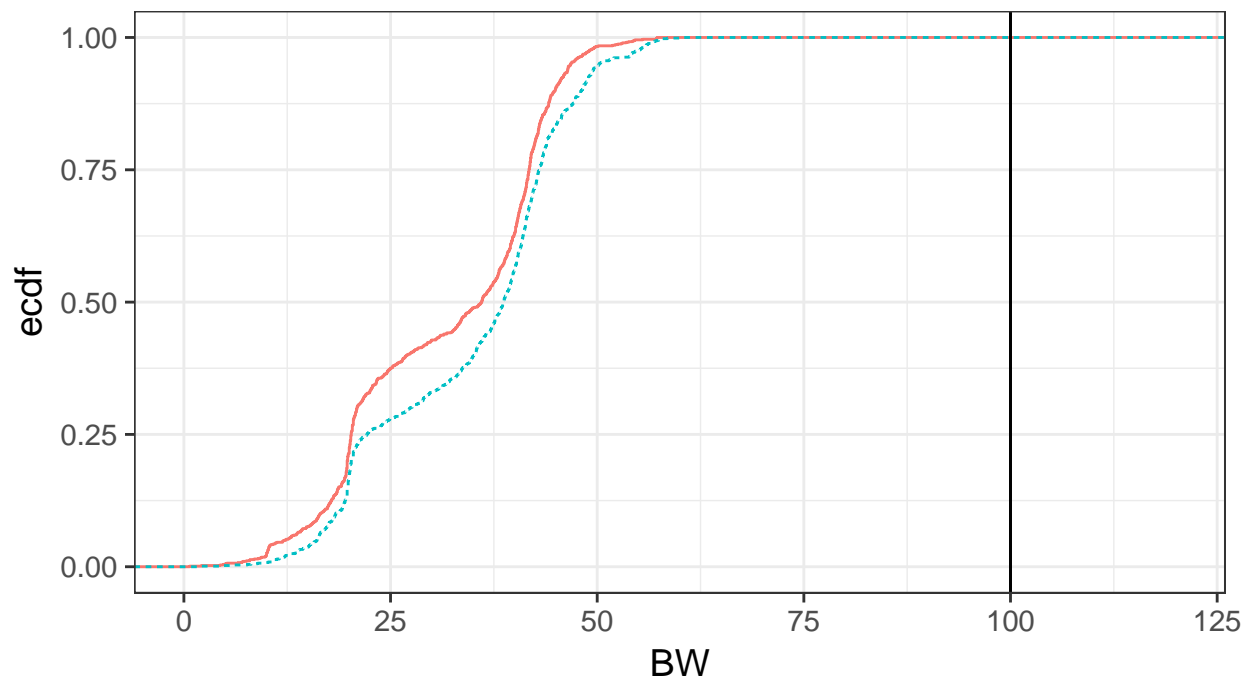
`draw3(dades)`



```
draw4(dades)+scale_x_continuous(limits=c(0,120))
```

URV 100 / 100

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 100 MB/s



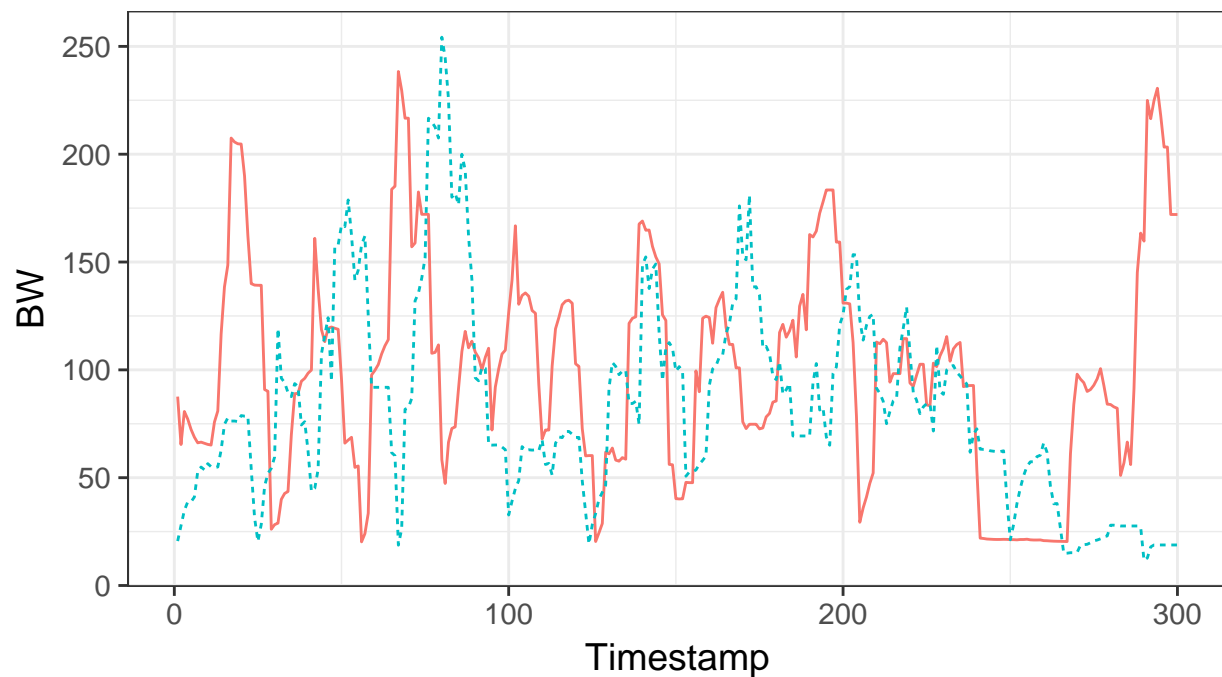
```
pdf(file="URV100_100_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,120))
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log35/log35.csv","BSC 100 / 100",100,100)
draw1(dades)
```

BSC 100 / 100

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 100 MB/s

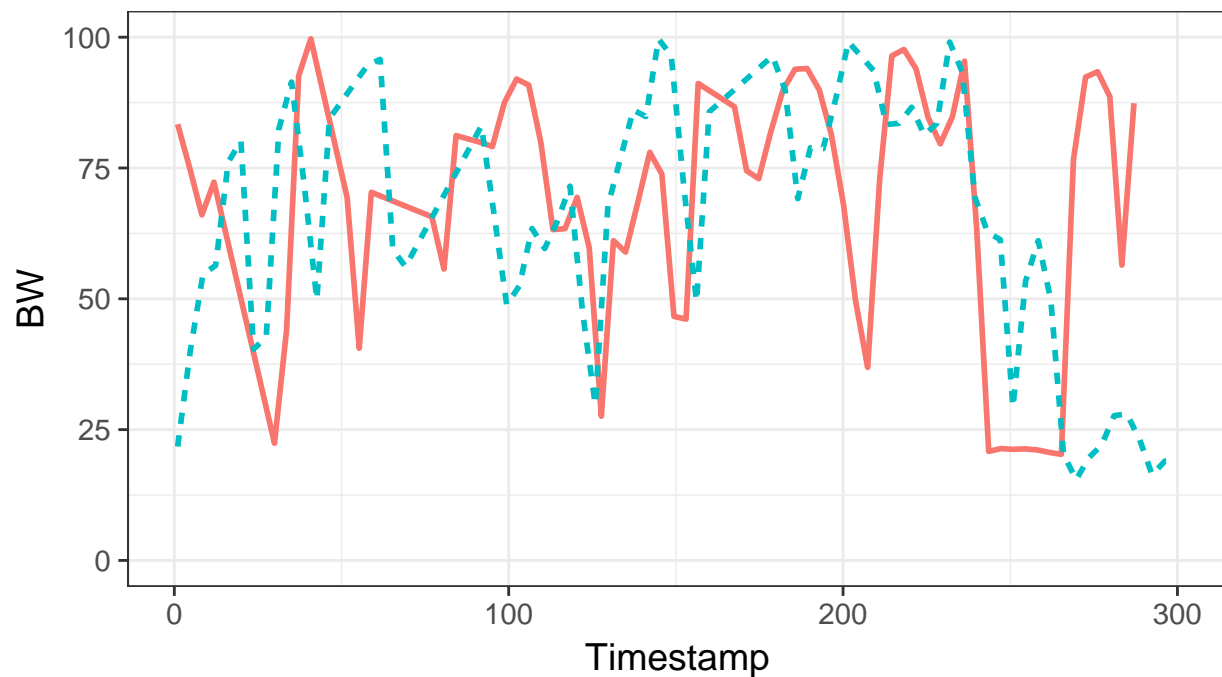


```
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

```
## Warning: Ignoring unknown parameters: degree
## `geom_smooth()` using method = 'loess'
## Warning: Removed 234 rows containing non-finite values (stat_smooth).
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmx= 200
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmx= 214
## Warning: Removed 26 rows containing missing values (geom_smooth).
```

BSC 100 / 100

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 100 MB/s



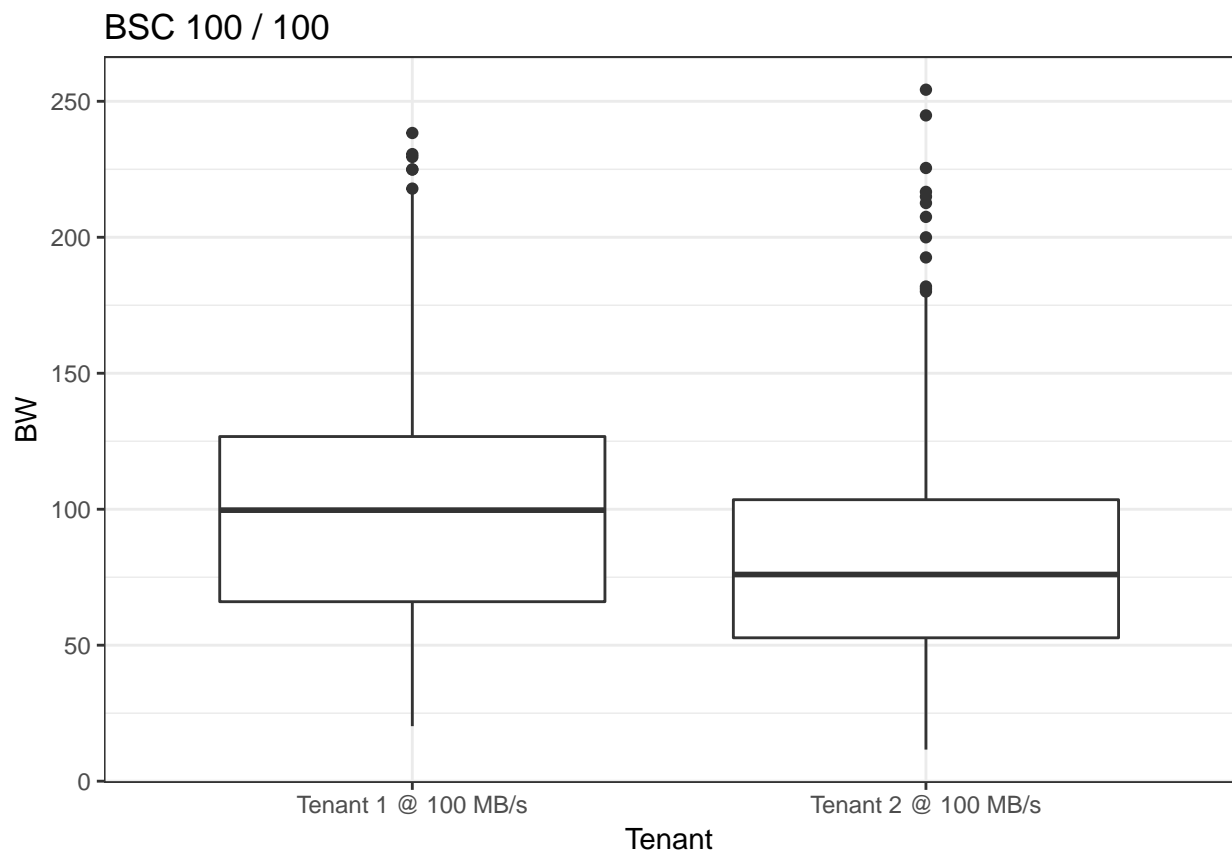
```
pdf(file="BSC100_100_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```

```
## Warning: Ignoring unknown parameters: degree
## `geom_smooth()` using method = 'loess'
## Warning: Removed 234 rows containing non-finite values (stat_smooth).
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmx= 200
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmx= 214
## Warning: Removed 26 rows containing missing values (geom_smooth).
```

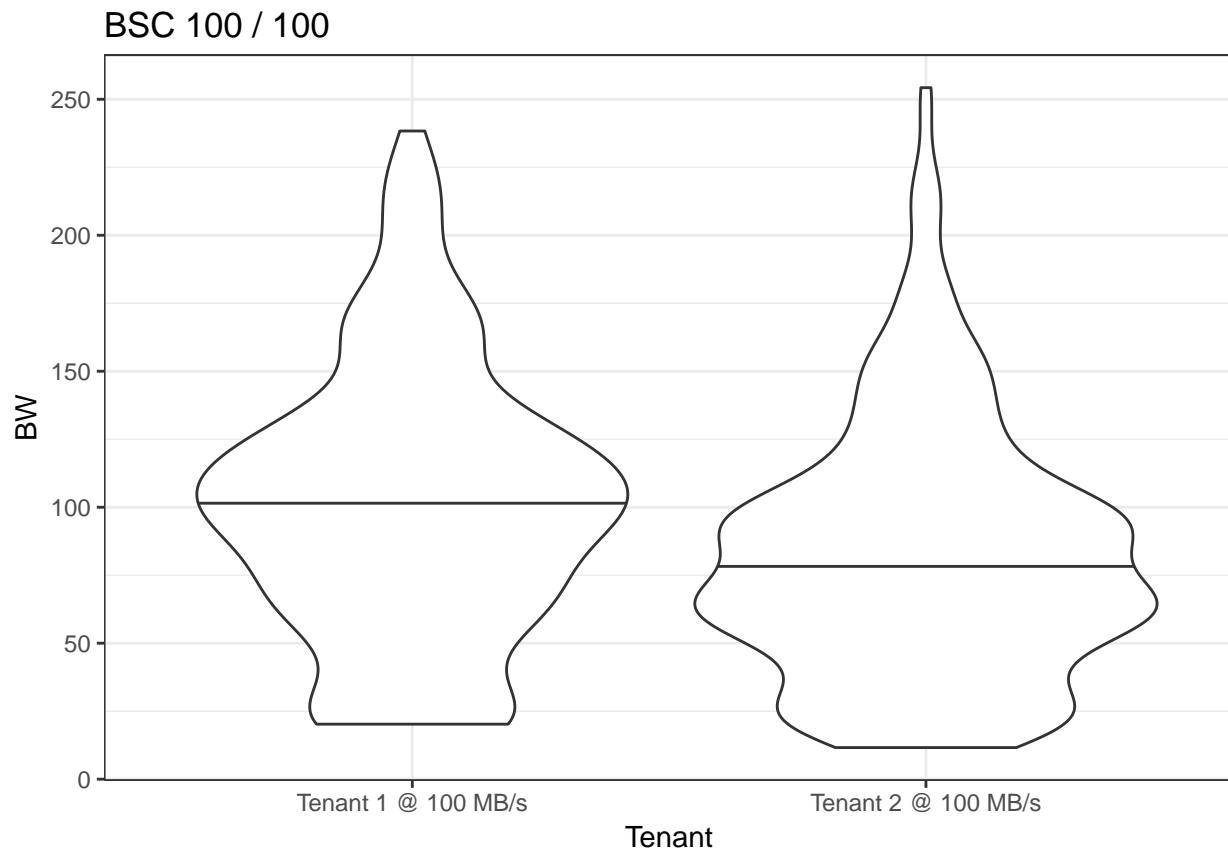
```
dev.off()
```

```
## pdf
## 2
```

```
draw2(dades)
```



```
draw3(dades)
```

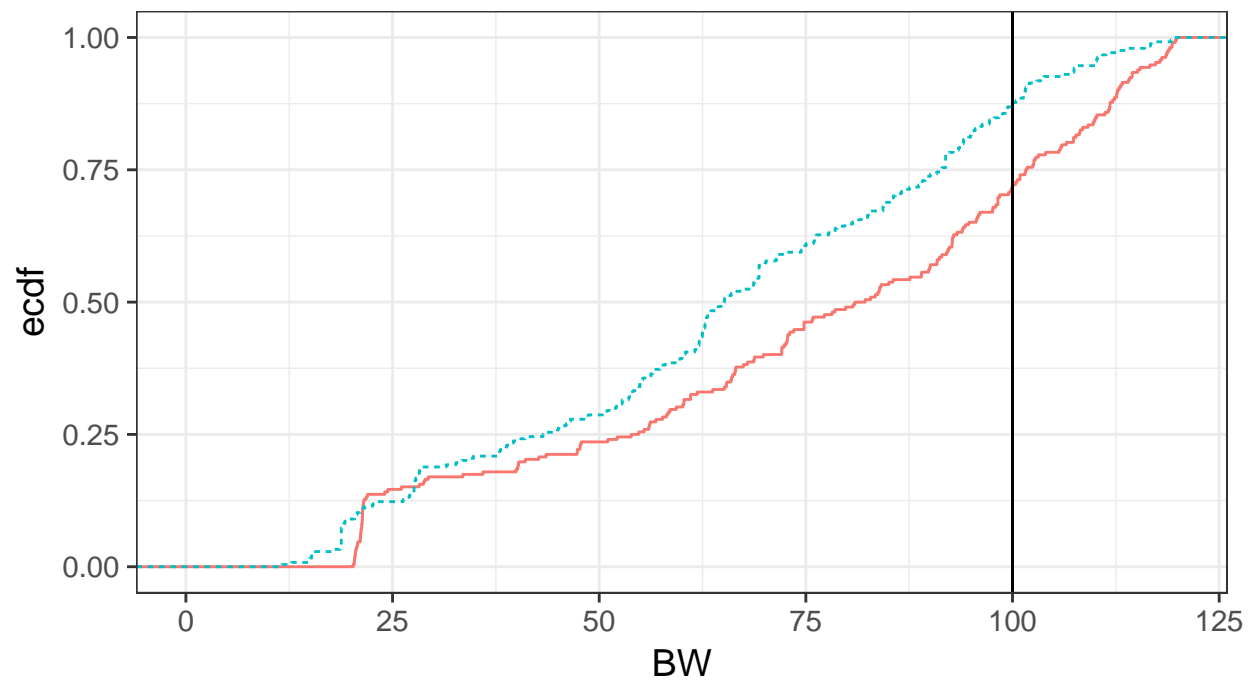


```
draw4(dades)+scale_x_continuous(limits=c(0,120))
```

```
## Warning: Removed 144 rows containing non-finite values (stat_ecdf).
```

BSC 100 / 100

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 100 MB/s



```
pdf(file="BSC100_100_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,120))
```

```
## Warning: Removed 144 rows containing non-finite values (stat_ecdf).
```

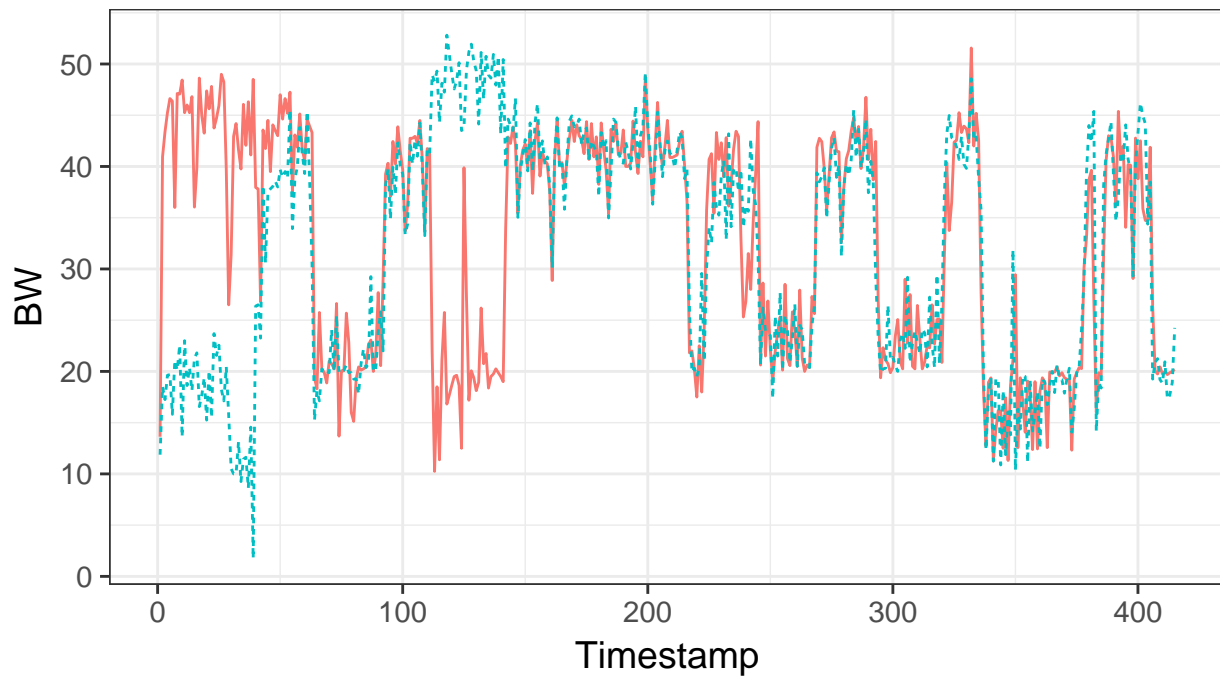
```
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log8/log8.csv","URV 50 / 50",50,50)
draw1(dades)
```

URV 50 / 50

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 50 MB/s



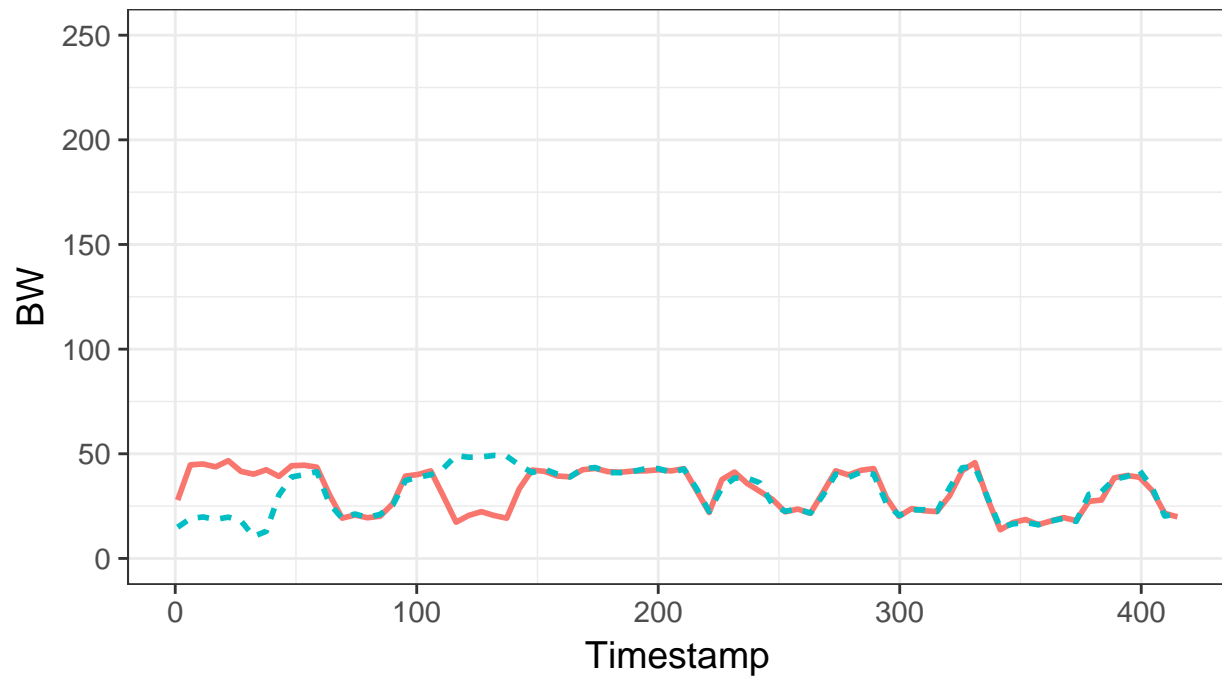
```
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```


URV 50 / 50

Tenant — Tenant 1 @ 50 MB/s - - Tenant 2 @ 50 MB/s



```
pdf(file="URV50_50_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

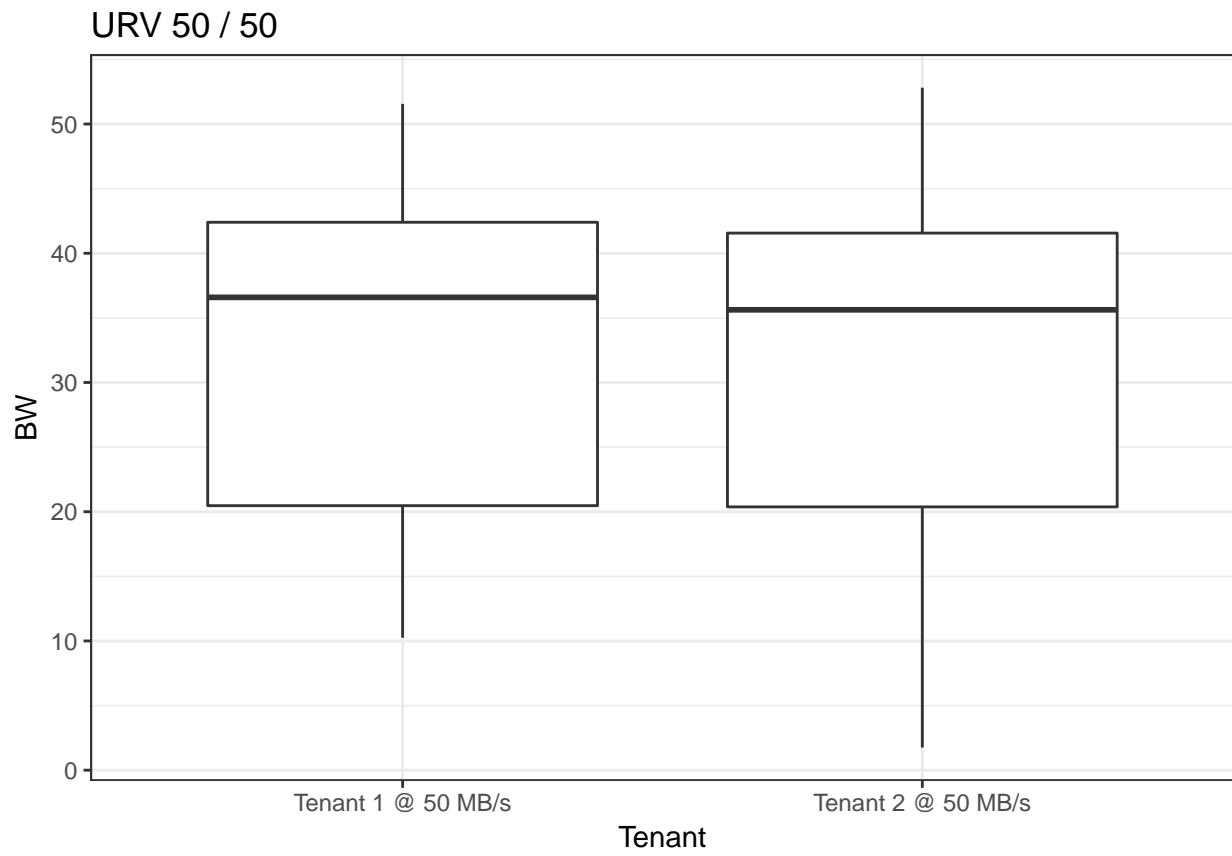
```
## `geom_smooth()` using method = 'loess'
```

```
dev.off()
```

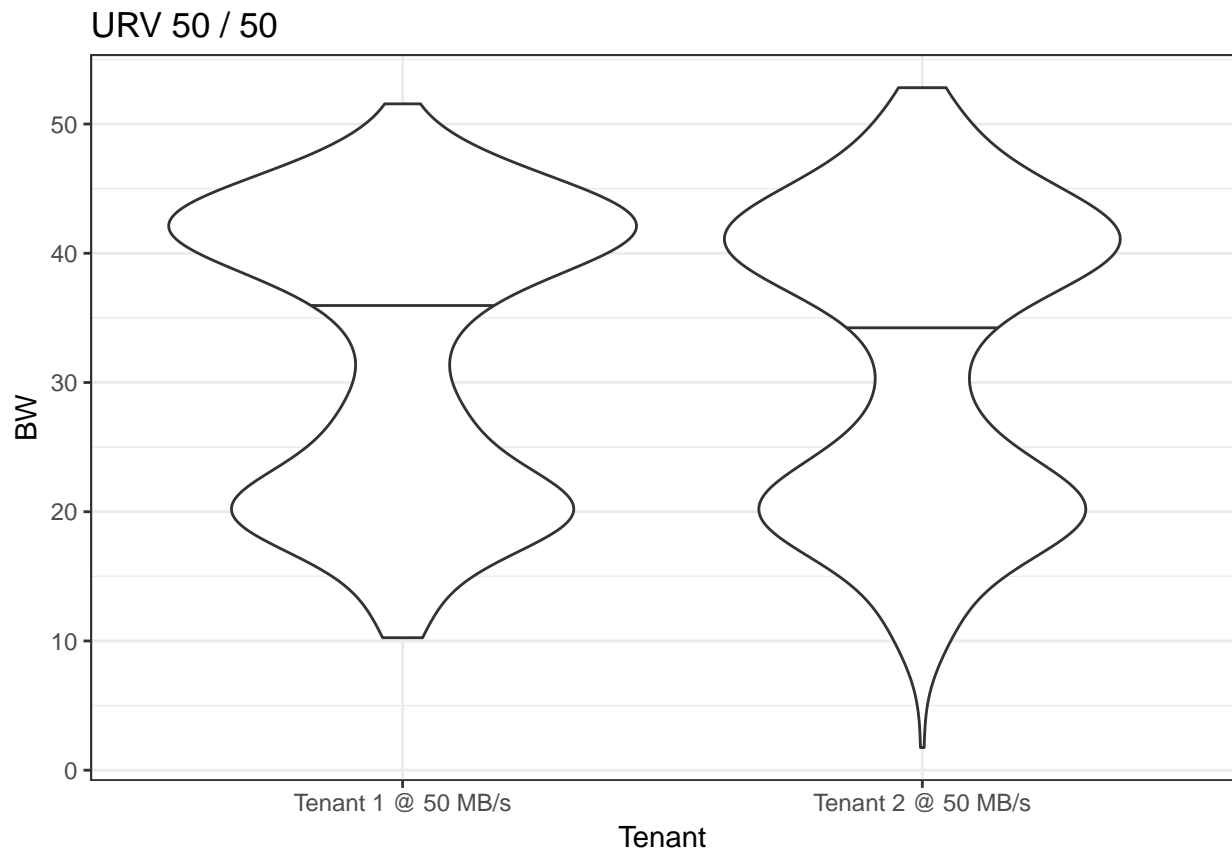
```
## pdf
```

```
## 2
```

```
draw2(dades)
```



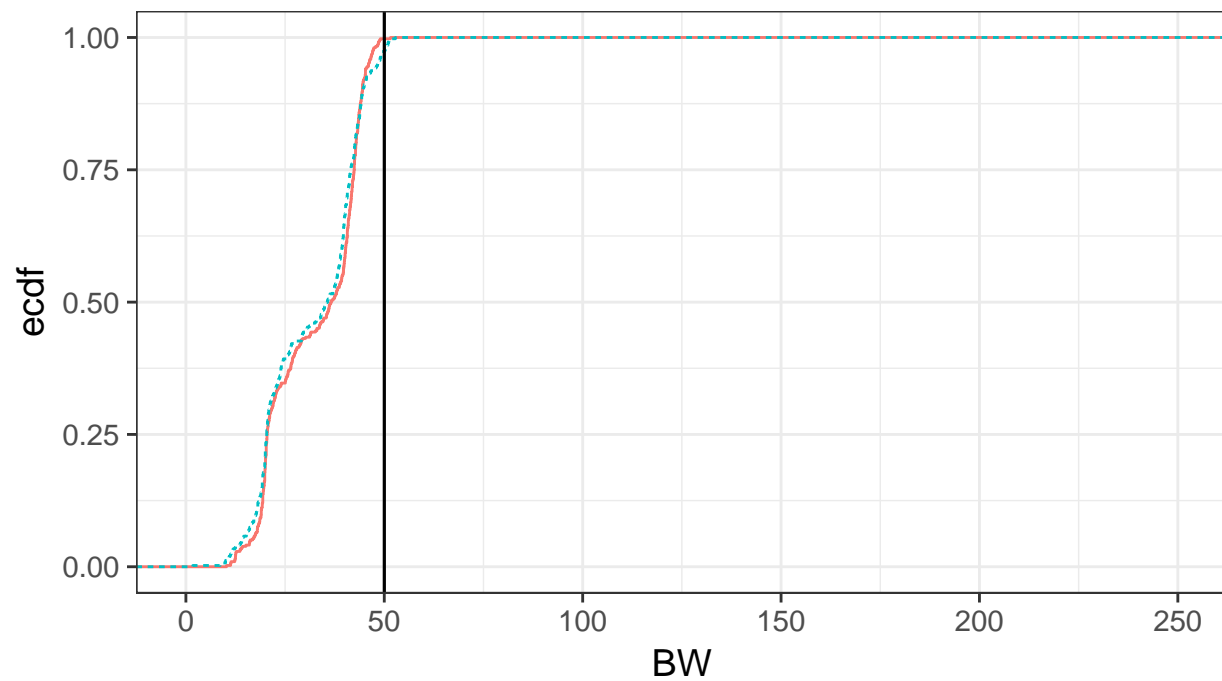
`draw3(dades)`



```
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

URV 50 / 50

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 50 MB/s



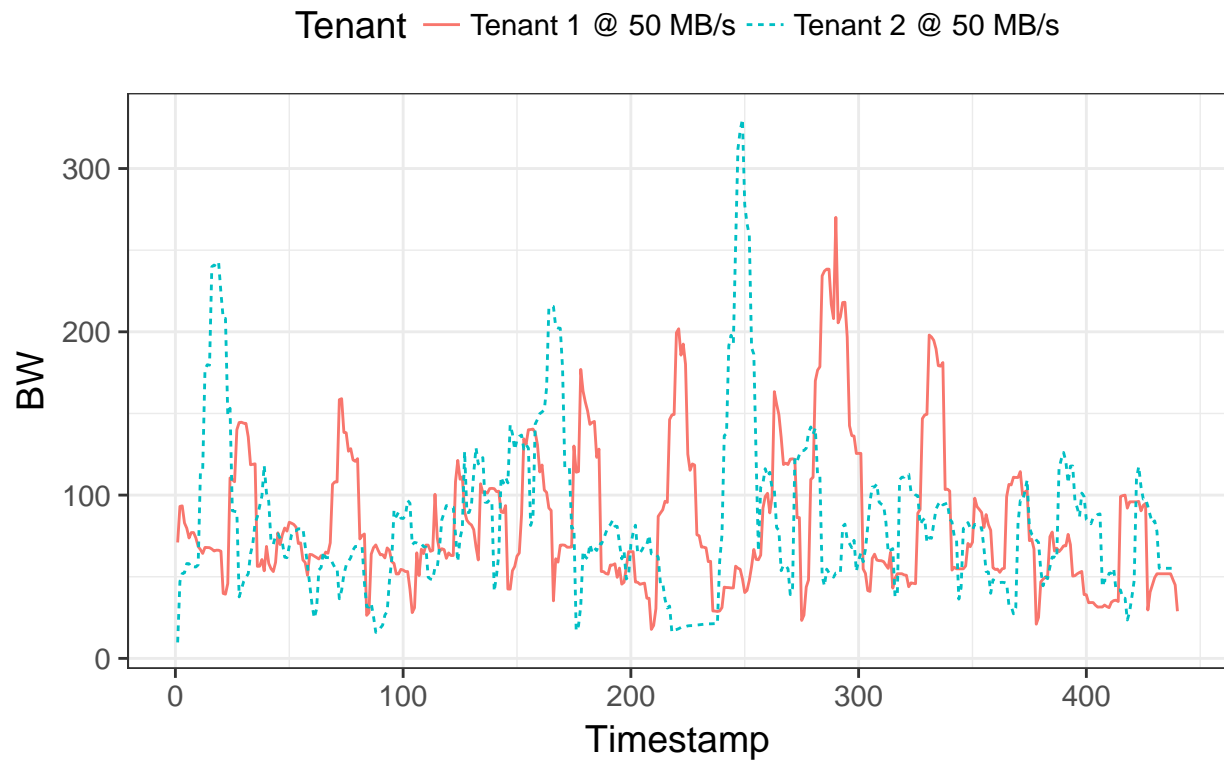
```
pdf(file="URV50_50_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,250))
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log11/log11.csv","BSC 50 / 50",50,50)
draw1(dades)
```

```
## Warning: Removed 1 rows containing missing values (geom_path).
```

BSC 50 / 50



```
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

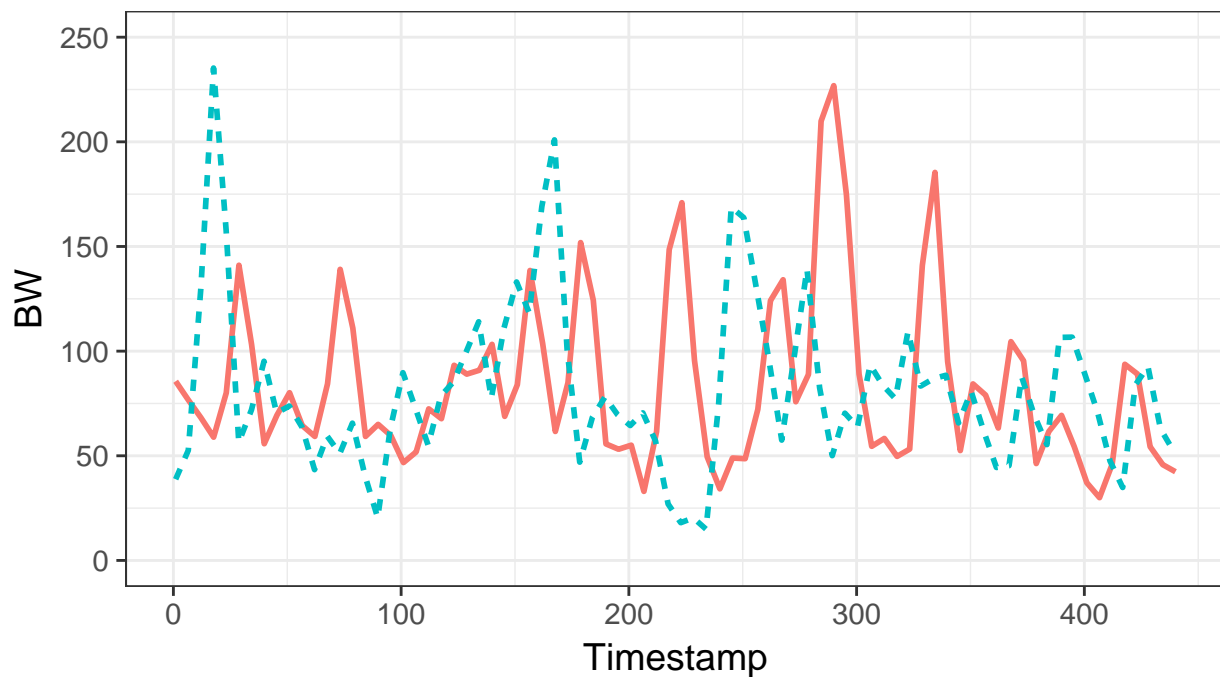
```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 9 rows containing non-finite values (stat_smooth).
```

BSC 50 / 50

Tenant — Tenant 1 @ 50 MB/s - - Tenant 2 @ 50 MB/s



```
pdf(file="BSC50_50_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 9 rows containing non-finite values (stat_smooth).
```

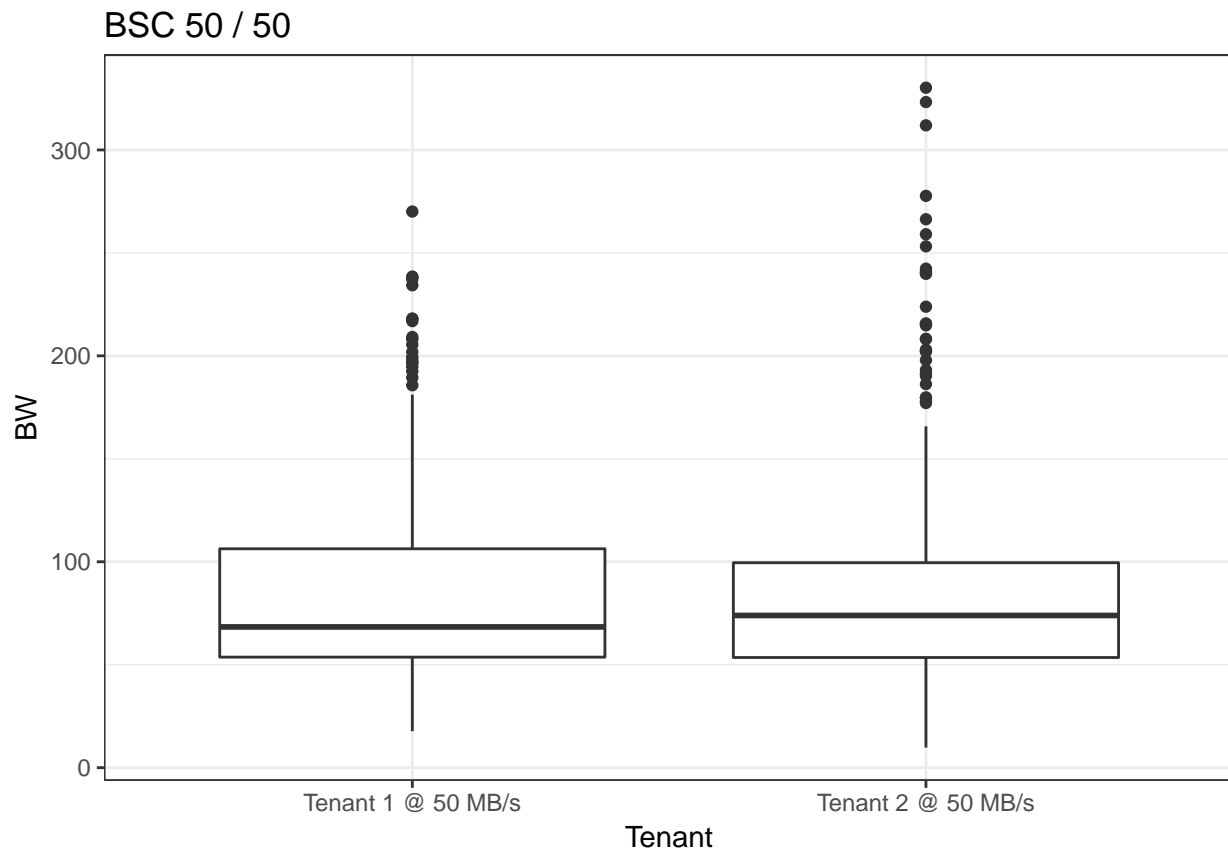
```
dev.off()
```

```
## pdf
```

```
## 2
```

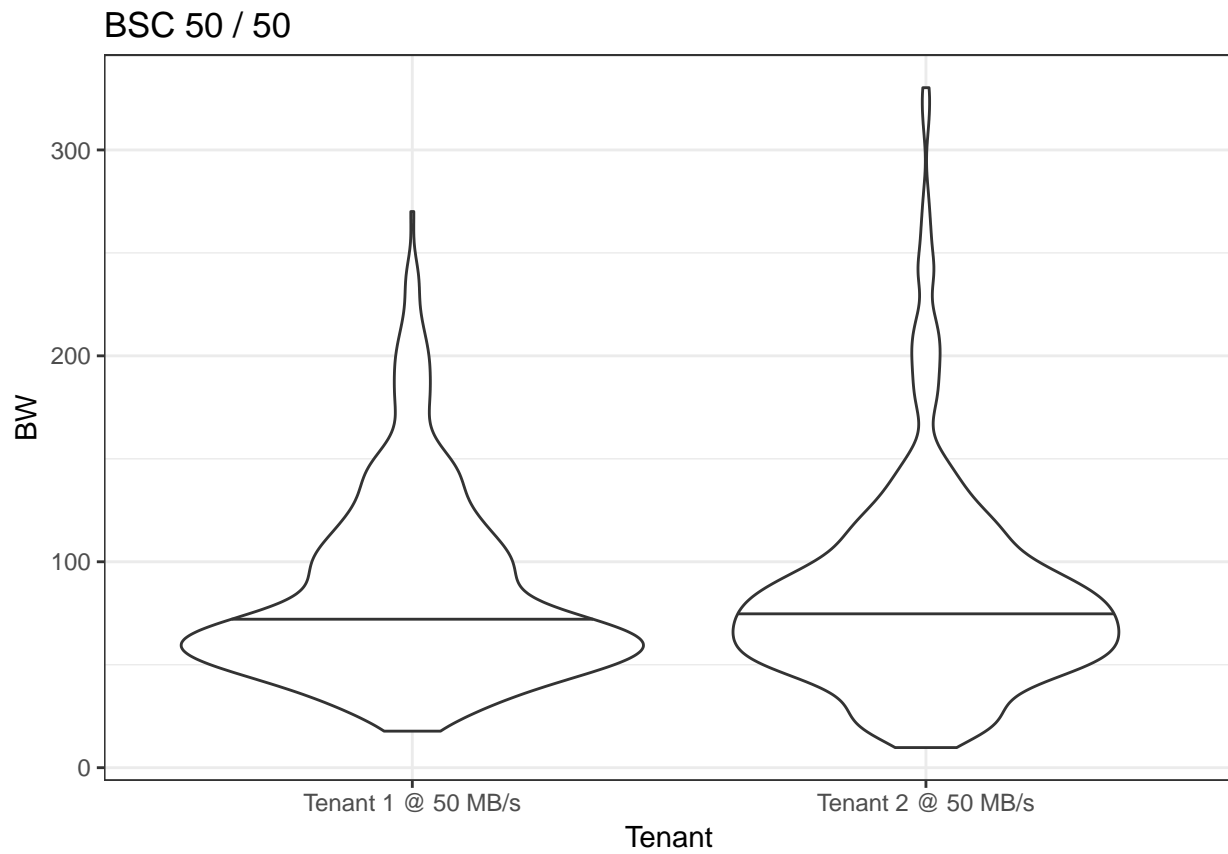
```
draw2(dades)
```

```
## Warning: Removed 1 rows containing non-finite values (stat_boxplot).
```



```
draw3(dades)
```

```
## Warning: Removed 1 rows containing non-finite values (stat_ydensity).
```

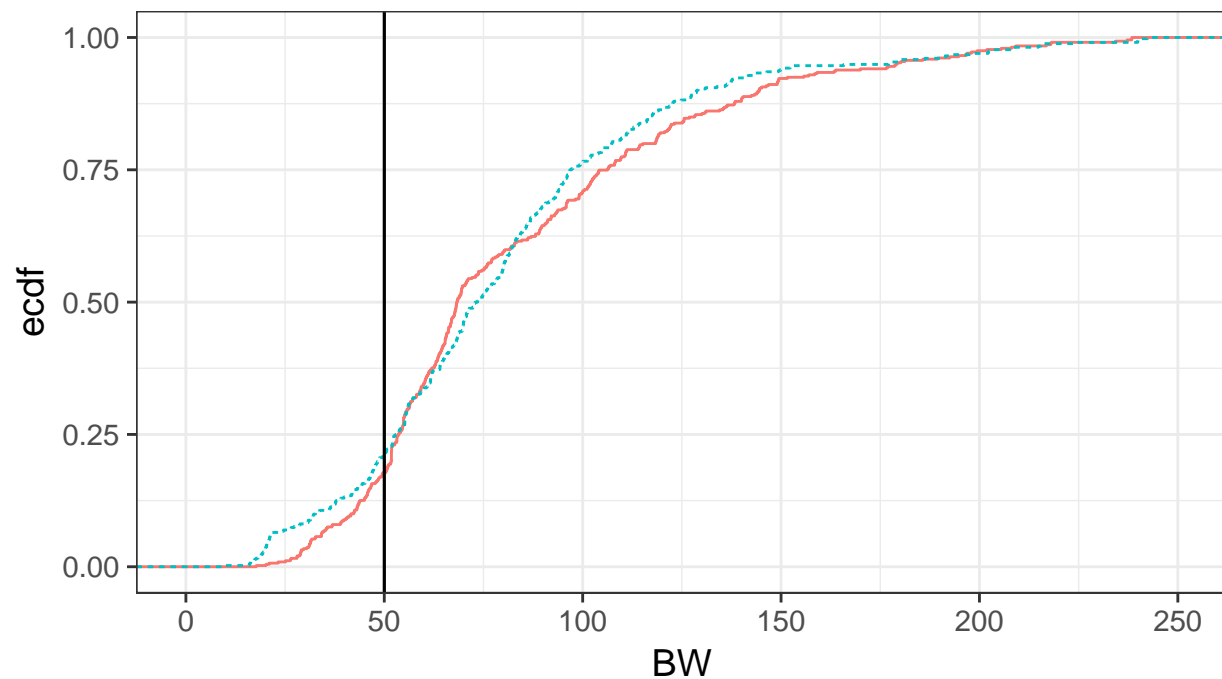


```
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

```
## Warning: Removed 9 rows containing non-finite values (stat_ecdf).
```


BSC 50 / 50

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 50 MB/s



```
pdf(file="BSC50_50_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

```
## Warning: Removed 9 rows containing non-finite values (stat_ecdf).
```

```
dev.off()
```

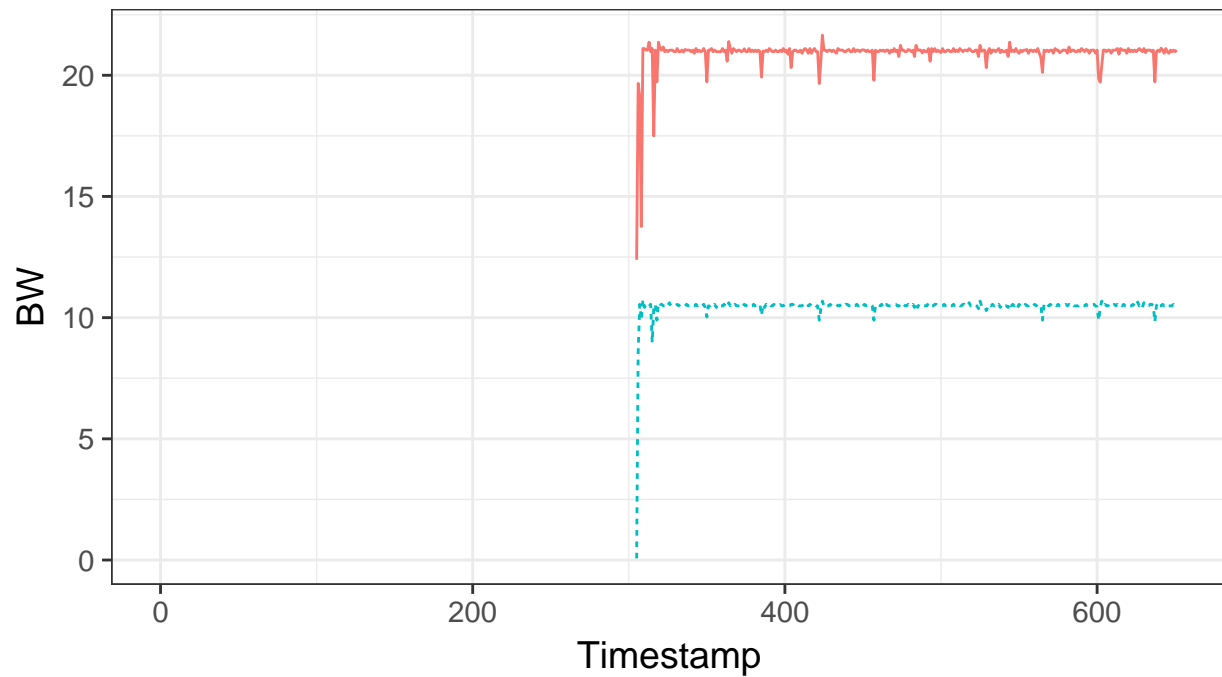
```
## pdf
## 2
```

```
dades <- loadData("../log38/log38.csv","URV 20 / 10",20,10)
draw1(dades)
```

```
## Warning: Removed 608 rows containing missing values (geom_path).
```

URV 20 / 10

Tenant — Tenant 1 @ 20 MB/s - - - Tenant 2 @ 10 MB/s



```
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

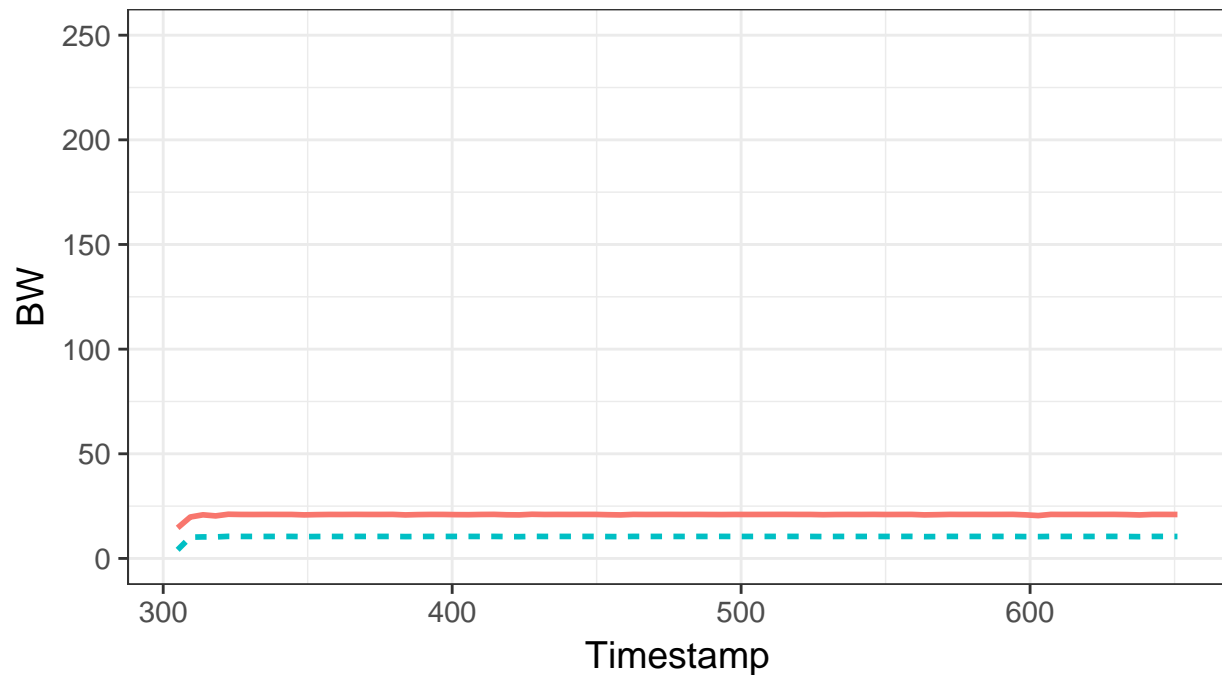
```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 608 rows containing non-finite values (stat_smooth).
```

URV 20 / 10

Tenant — Tenant 1 @ 20 MB/s - - Tenant 2 @ 10 MB/s



```
pdf(file="URV20_10_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 608 rows containing non-finite values (stat_smooth).
```

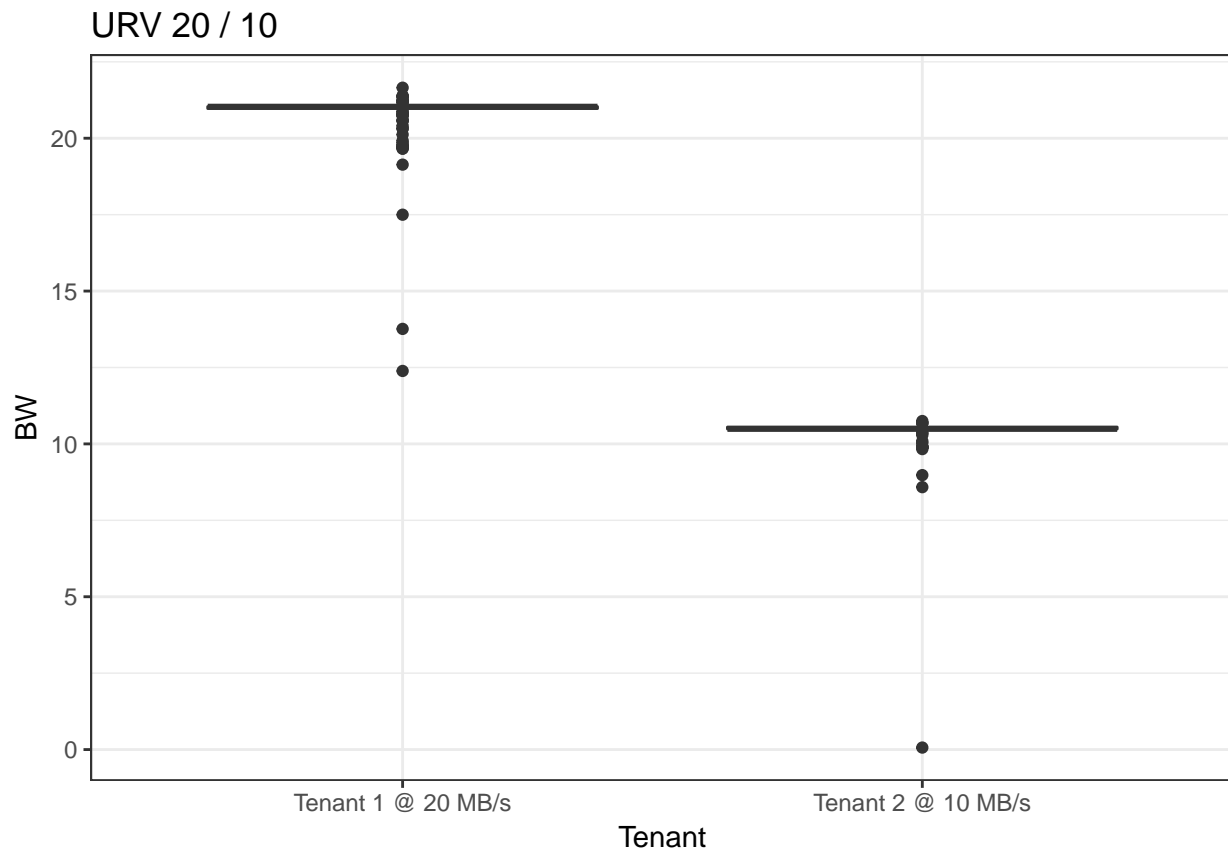
```
dev.off()
```

```
## pdf
```

```
## 2
```

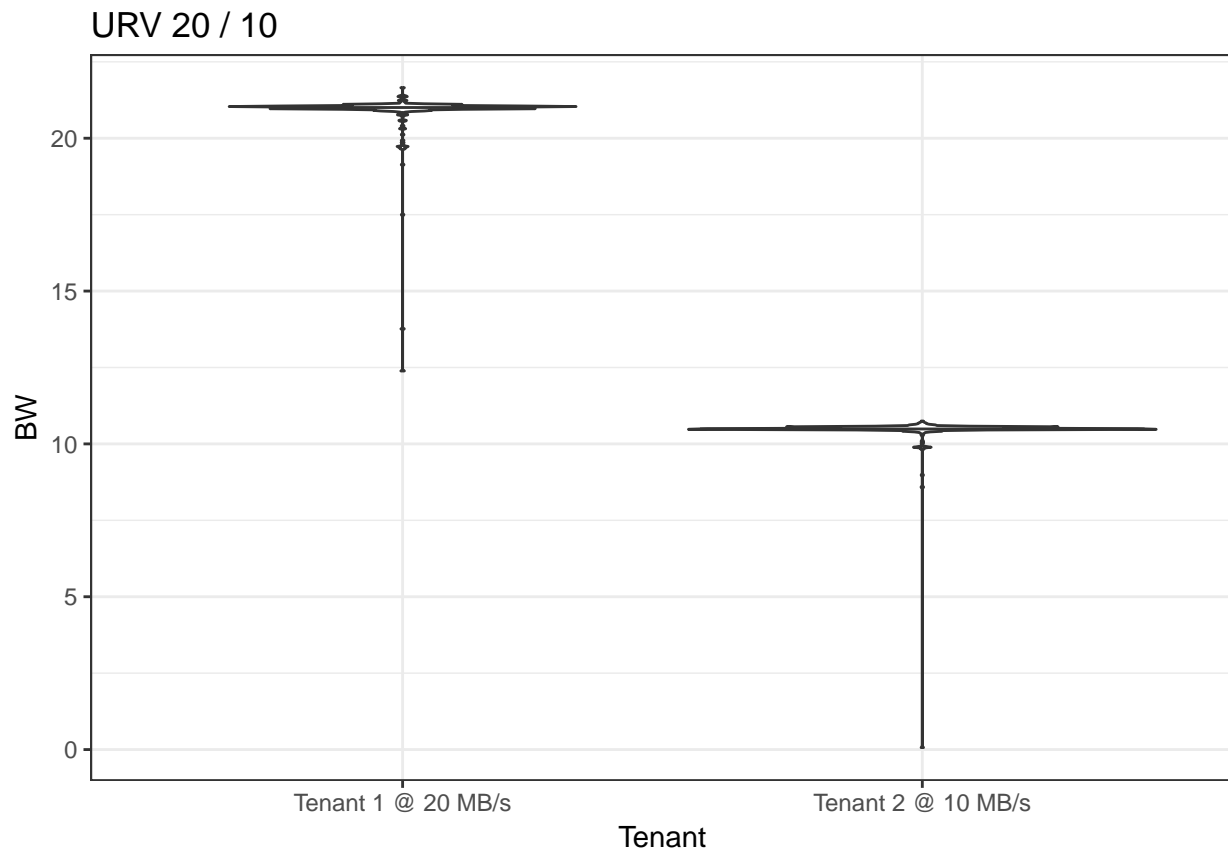
```
draw2(dades)
```

```
## Warning: Removed 608 rows containing non-finite values (stat_boxplot).
```



```
draw3(dades)
```

```
## Warning: Removed 608 rows containing non-finite values (stat_ydensity).
```

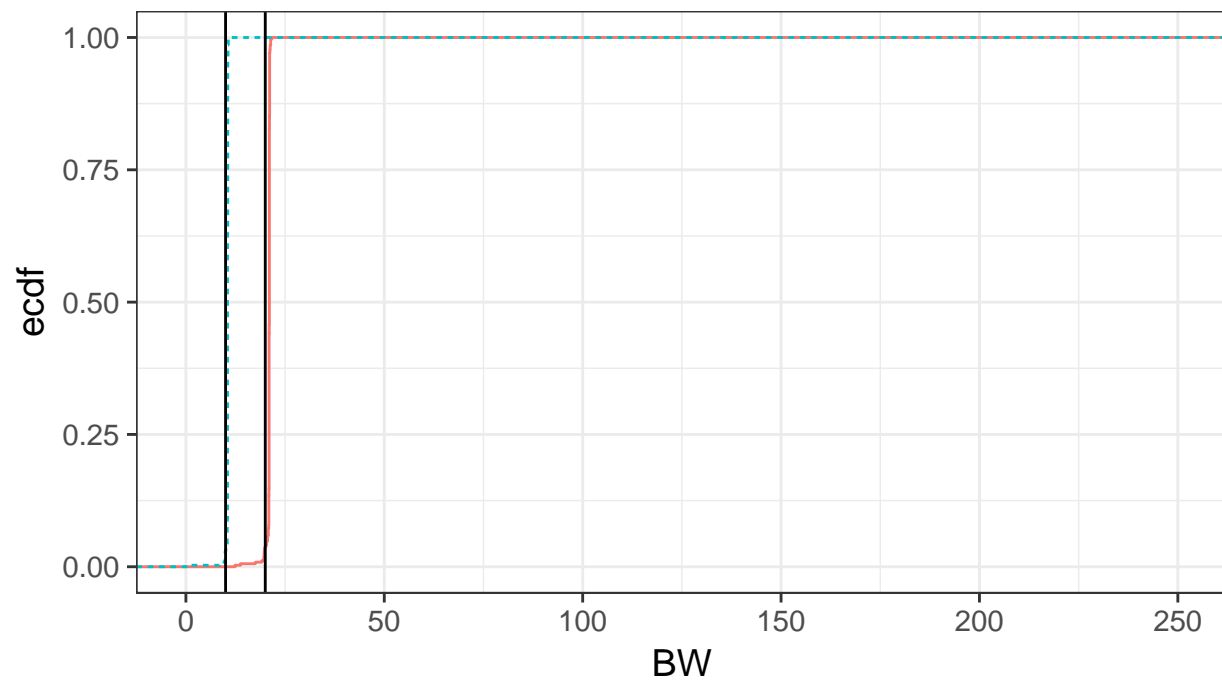


```
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

```
## Warning: Removed 608 rows containing non-finite values (stat_ecdf).
```

URV 20 / 10

Tenant — Tenant 1 @ 20 MB/s - - - Tenant 2 @ 10 MB/s



```
pdf(file="URV20_10_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

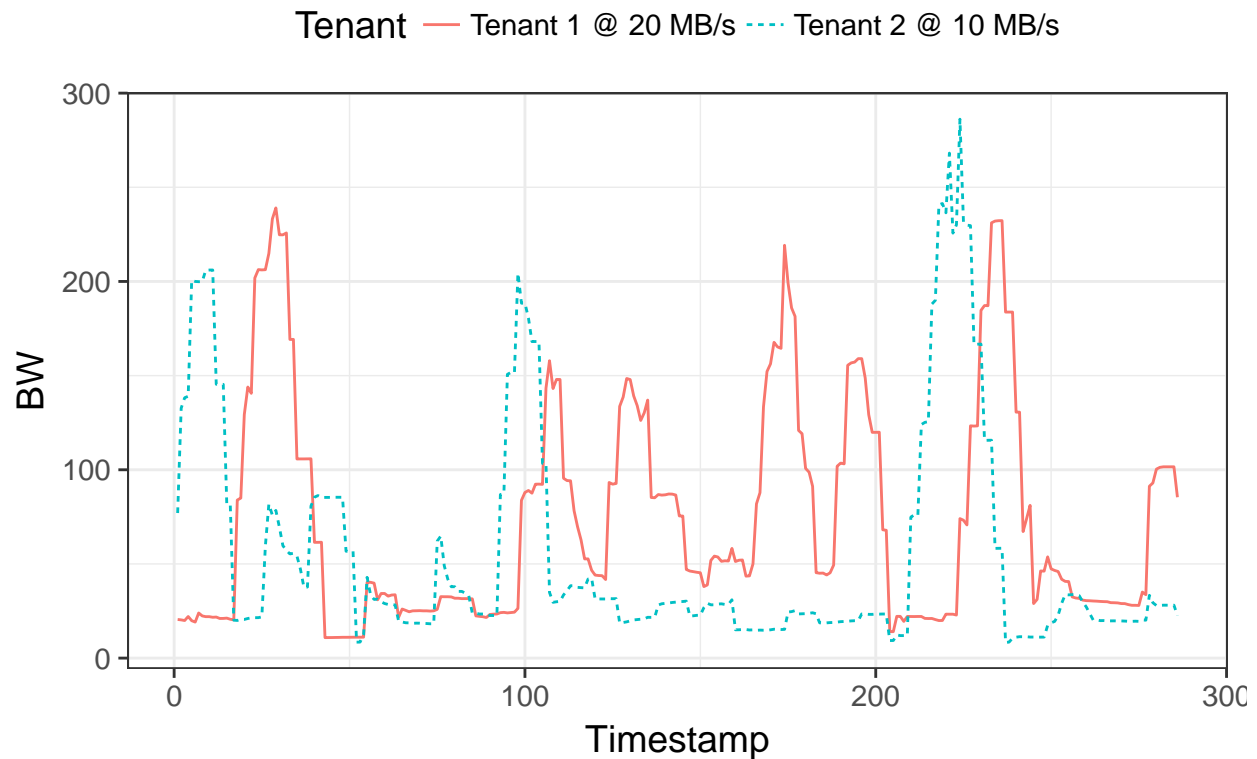
```
## Warning: Removed 608 rows containing non-finite values (stat_ecdf).
```

```
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log40/log40.csv","BSC 20 / 10",20,10)
draw1(dades)
```

BSC 20 / 10



```
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

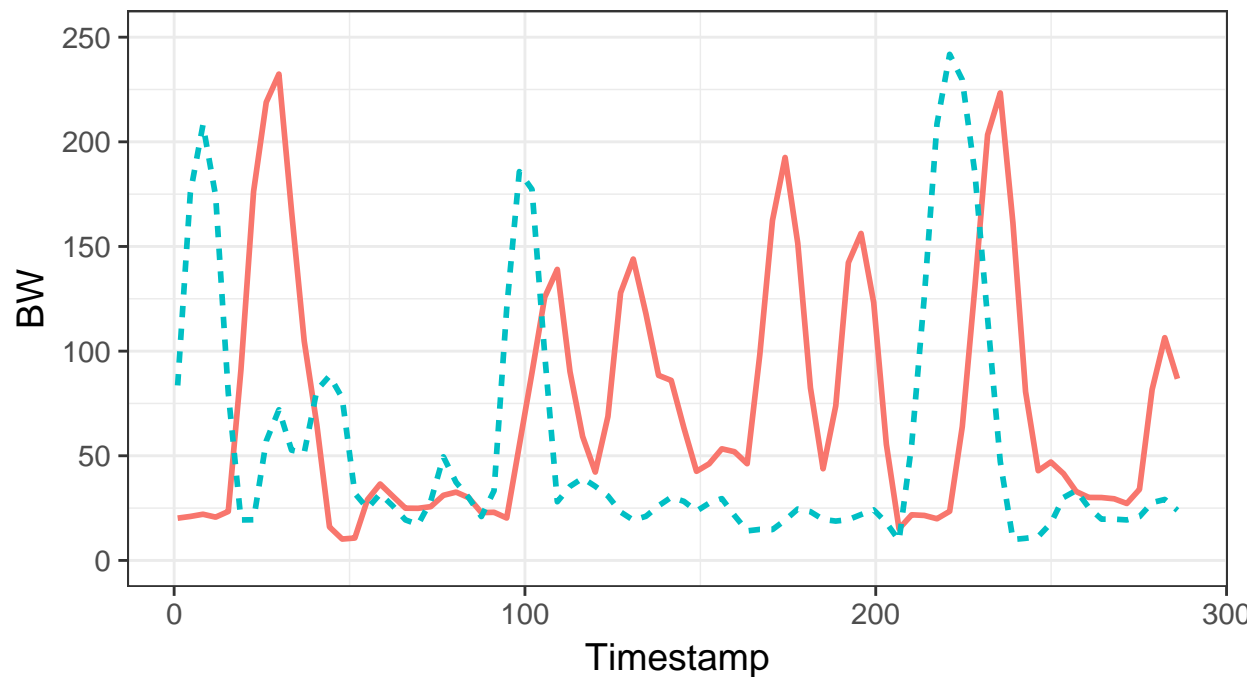
```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =  
## parametric, : k-d tree limited by memory. ncmx= 286
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =  
## parametric, : k-d tree limited by memory. ncmx= 284
```

BSC 20 / 10

Tenant — Tenant 1 @ 20 MB/s - - Tenant 2 @ 10 MB/s

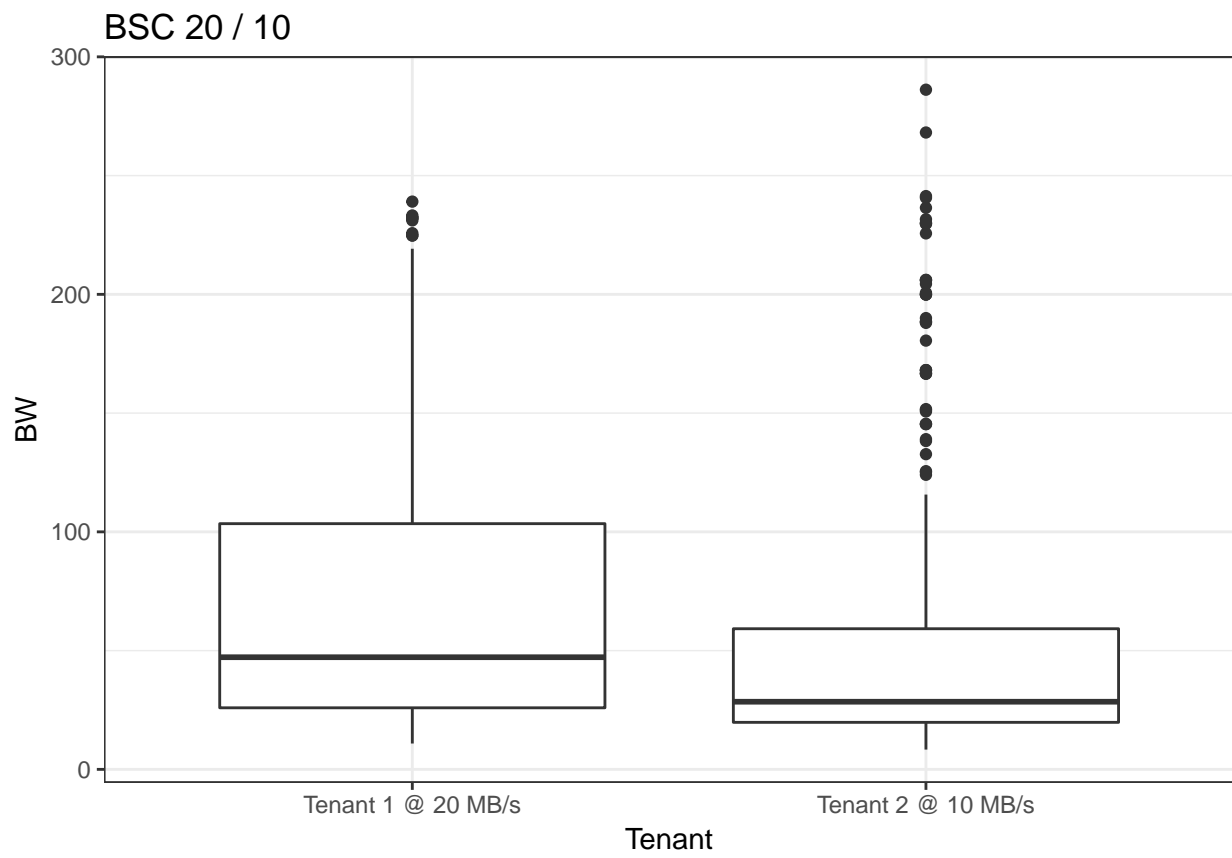


```
pdf(file="BSC20_10_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

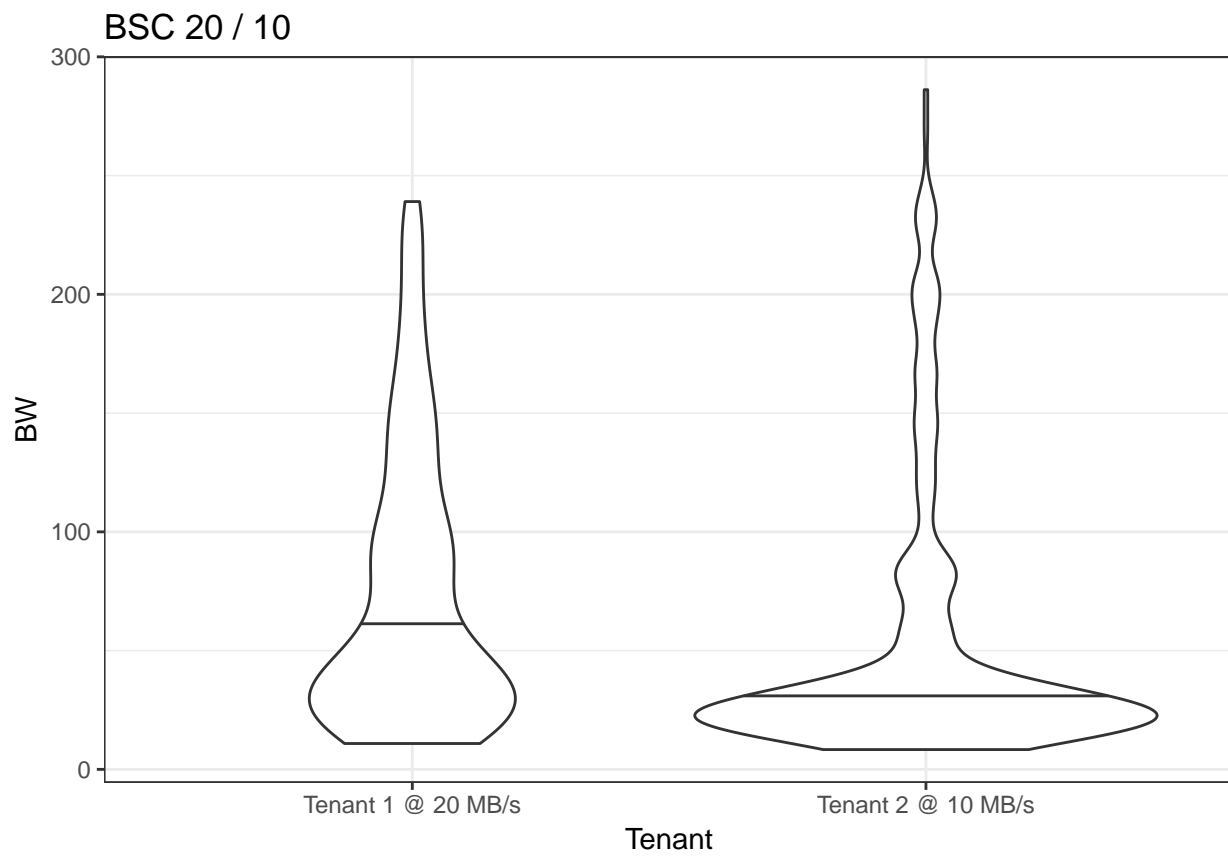
```
## Warning: Ignoring unknown parameters: degree
## `geom_smooth()` using method = 'loess'
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 286
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 284
```

```
dev.off()
```

```
## pdf
## 2
draw2(dades)
```

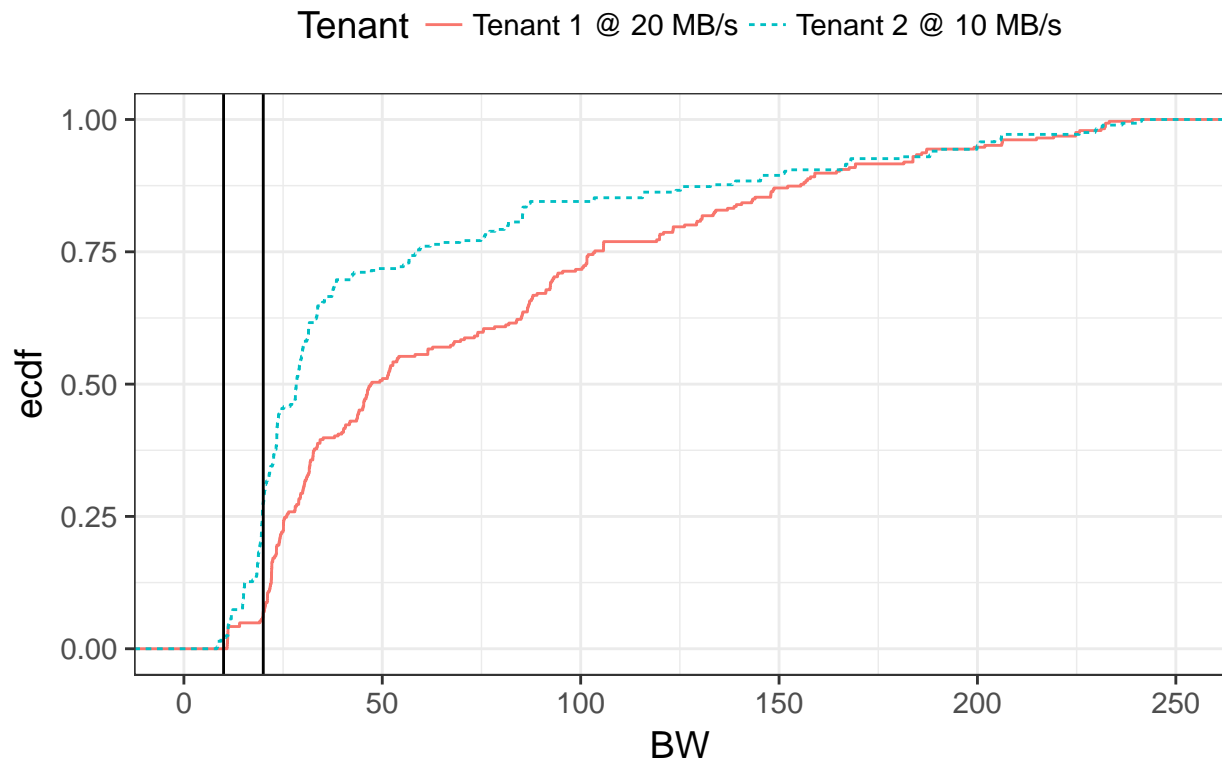
```
draw3(dades)
```



```
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

```
## Warning: Removed 2 rows containing non-finite values (stat_ecdf).
```

BSC 20 / 10



```
pdf(file="BSC20_10_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

```
## Warning: Removed 2 rows containing non-finite values (stat_ecdf).
```

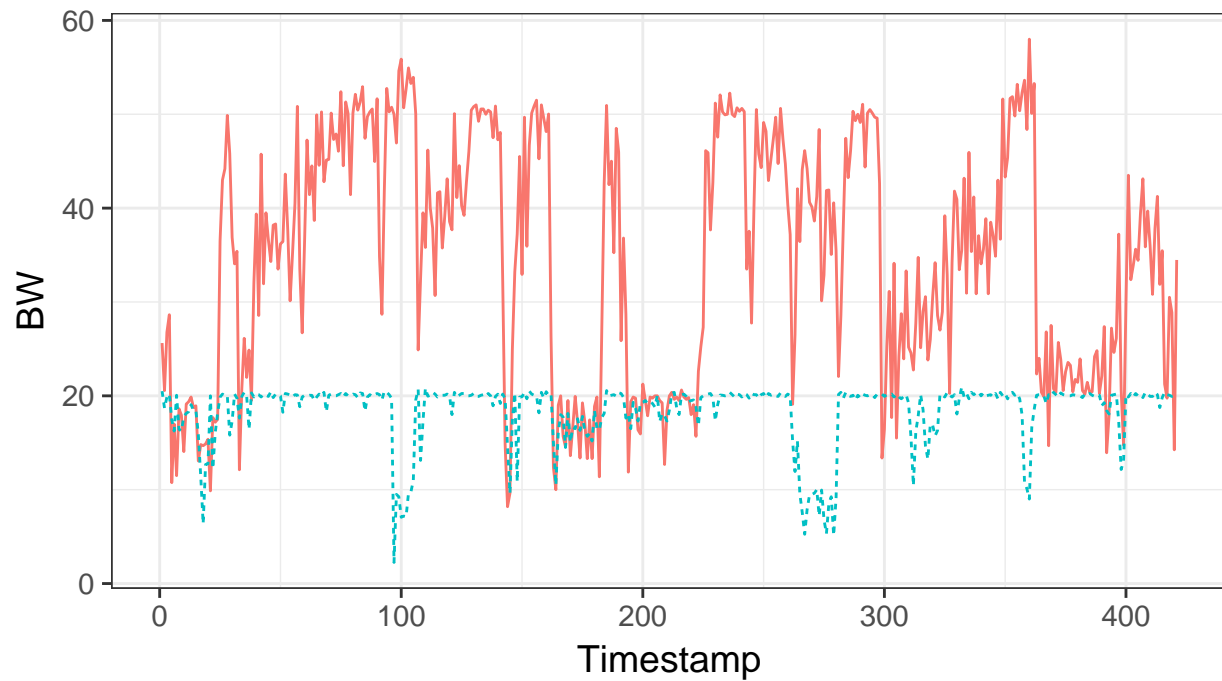
```
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log19/log19.csv","URV 50 / 20 / Outside interference of 10 MB/s ",50,20)
draw1(dades)
```

URV 50 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



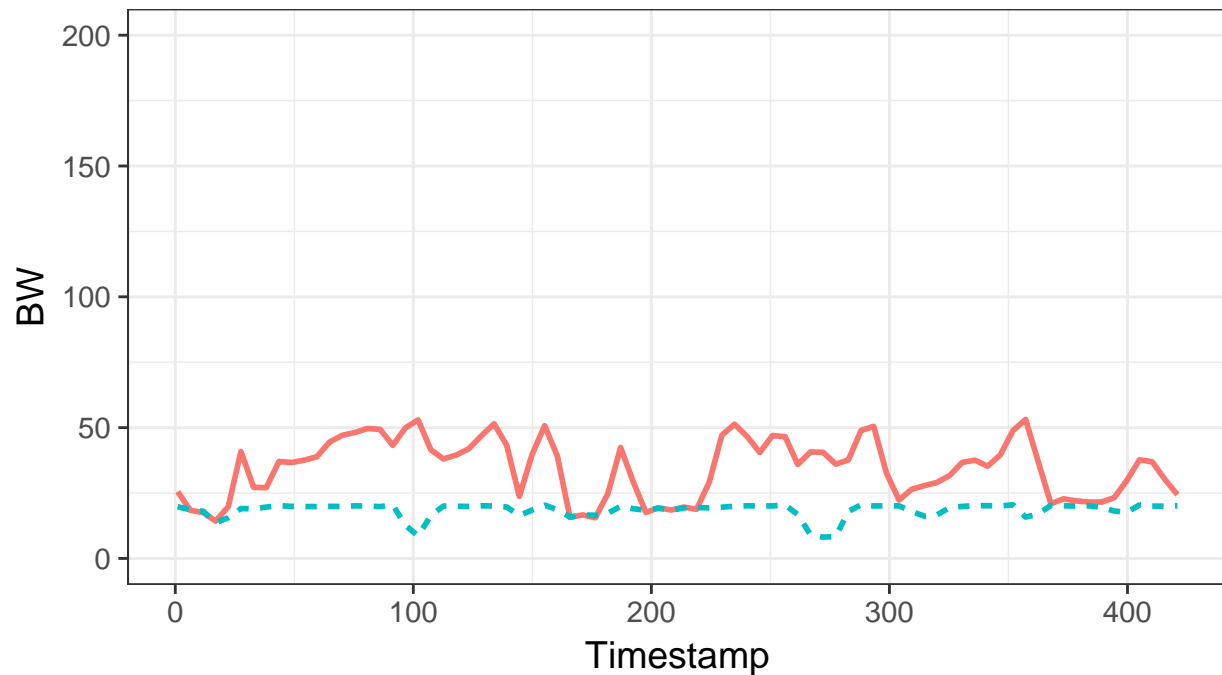
```
drawsmooth(dades)+scale_y_continuous(limits=c(0,200))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

URV 50 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="URV50_20_10i_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,200))
```

```
## Warning: Ignoring unknown parameters: degree
```

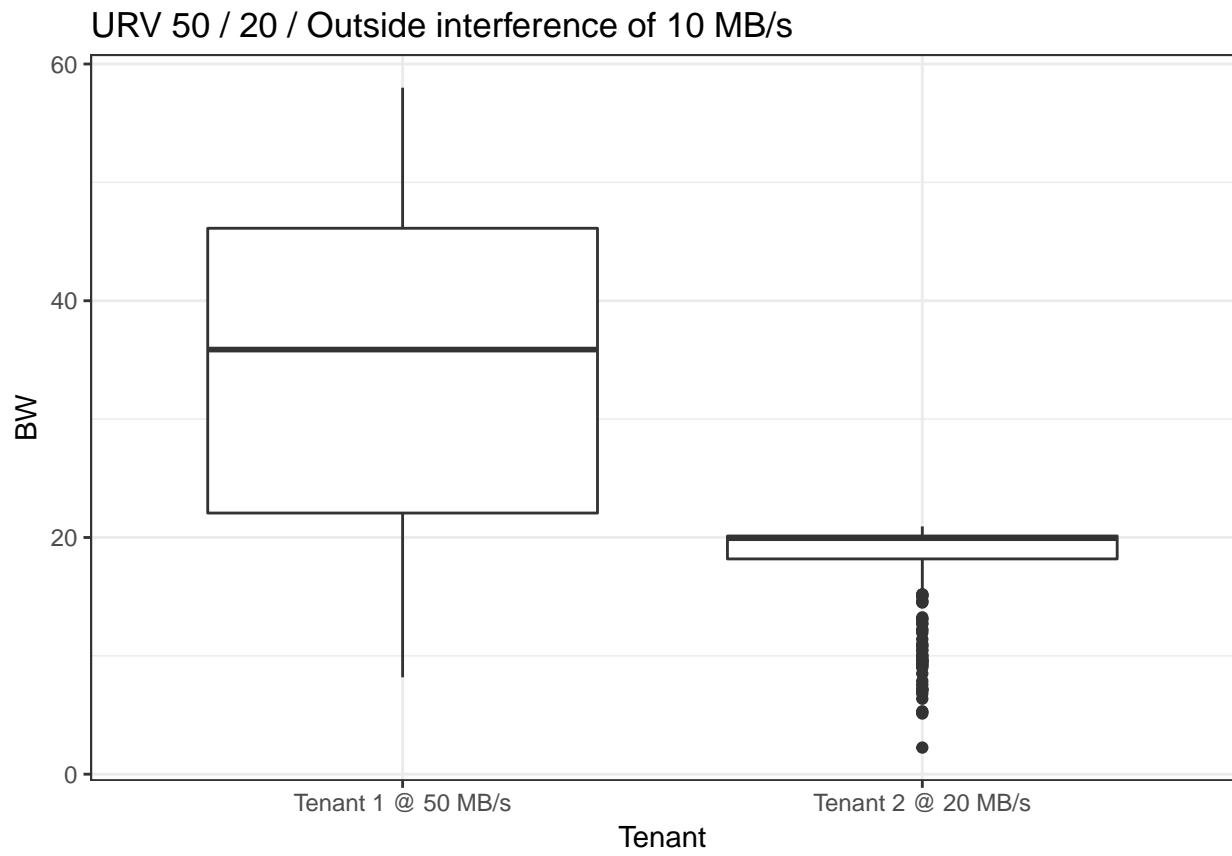
```
## `geom_smooth()` using method = 'loess'
```

```
dev.off()
```

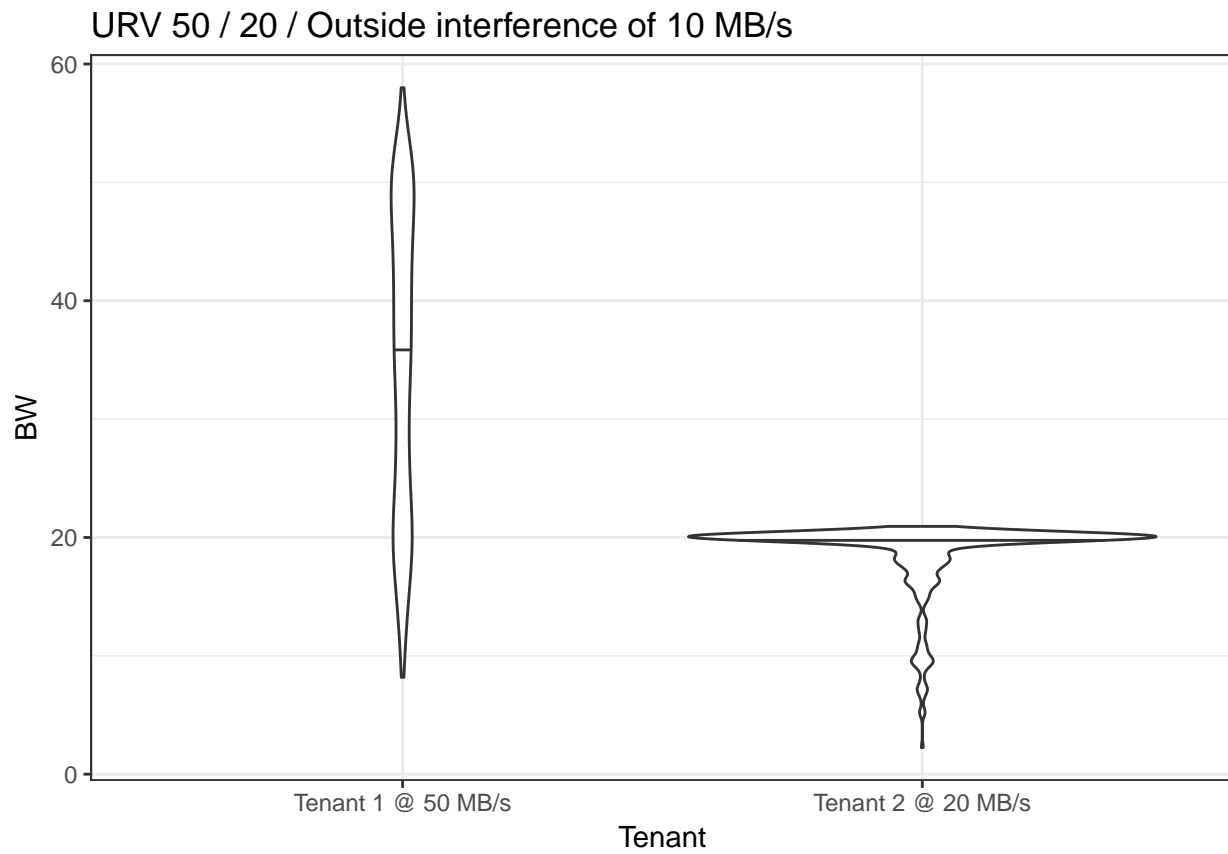
```
## pdf
```

```
## 2
```

```
draw2(dades)
```



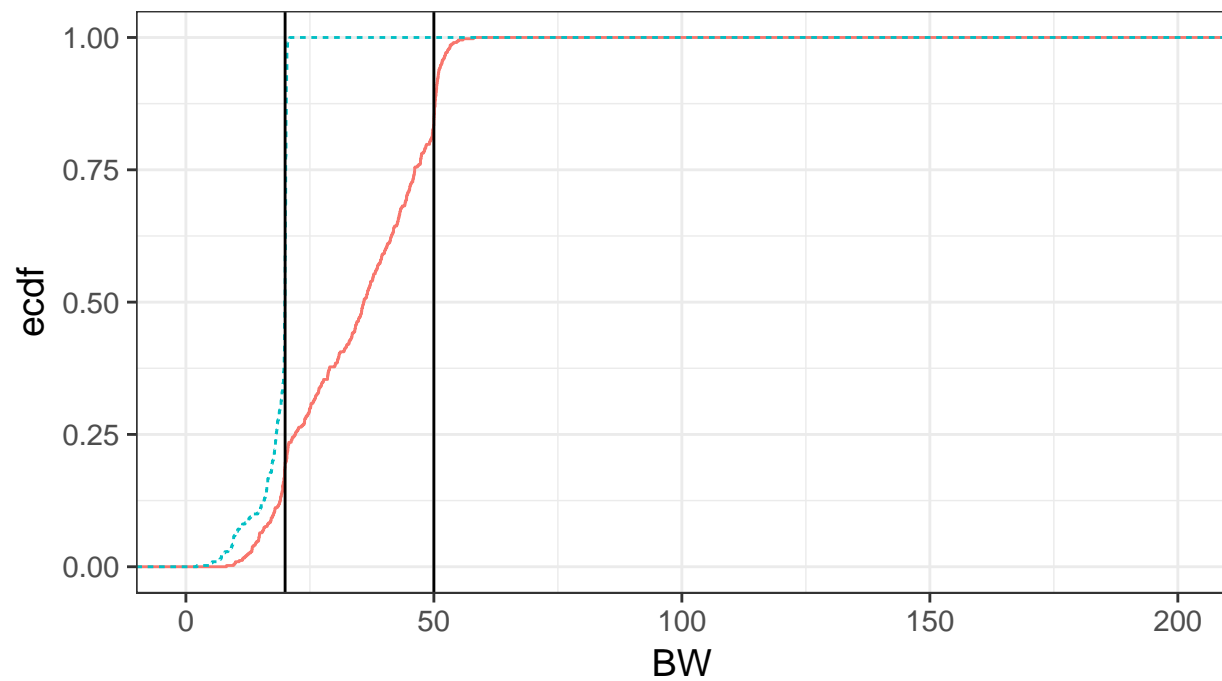
`draw3(dades)`



```
draw4(dades)+scale_x_continuous(limits=c(0,200))
```

URV 50 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



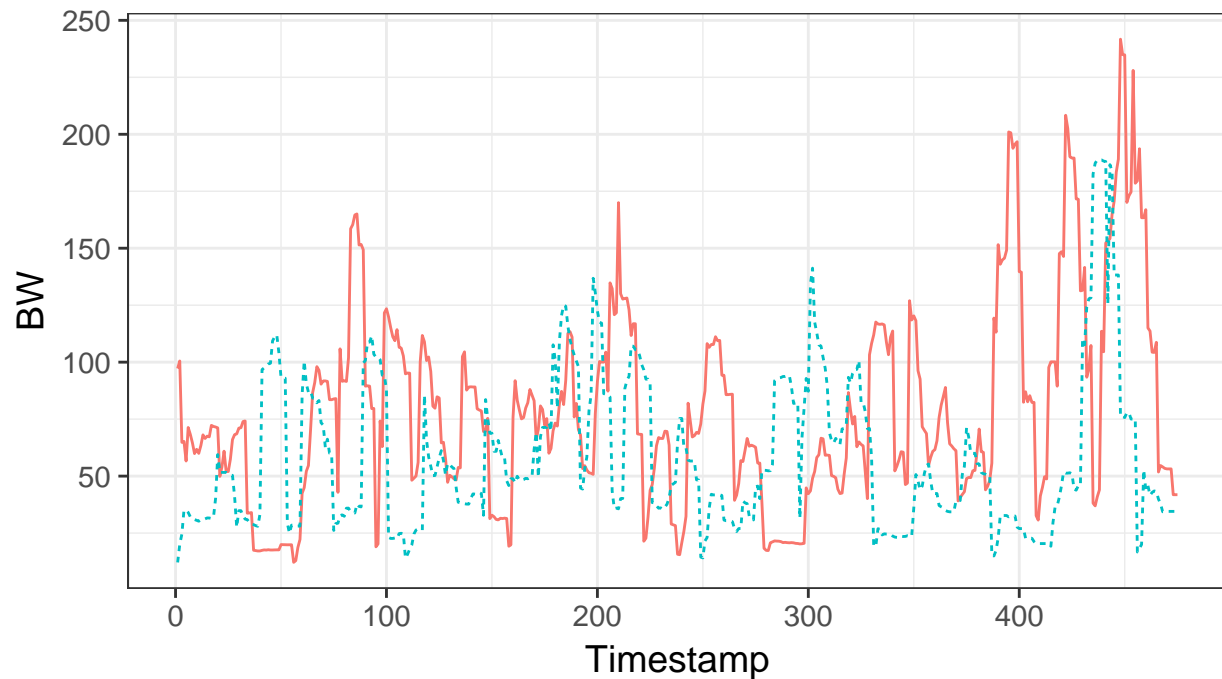
```
pdf(file="URV50_20_10i_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,200))
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log26/log26.csv","BSC 50 / 20 / Outside interference of 10 MB/s",20,50)
draw1(dades)
```


BSC 50 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
drawsmooth(dades)+scale_y_continuous(limits=c(0,200))
```

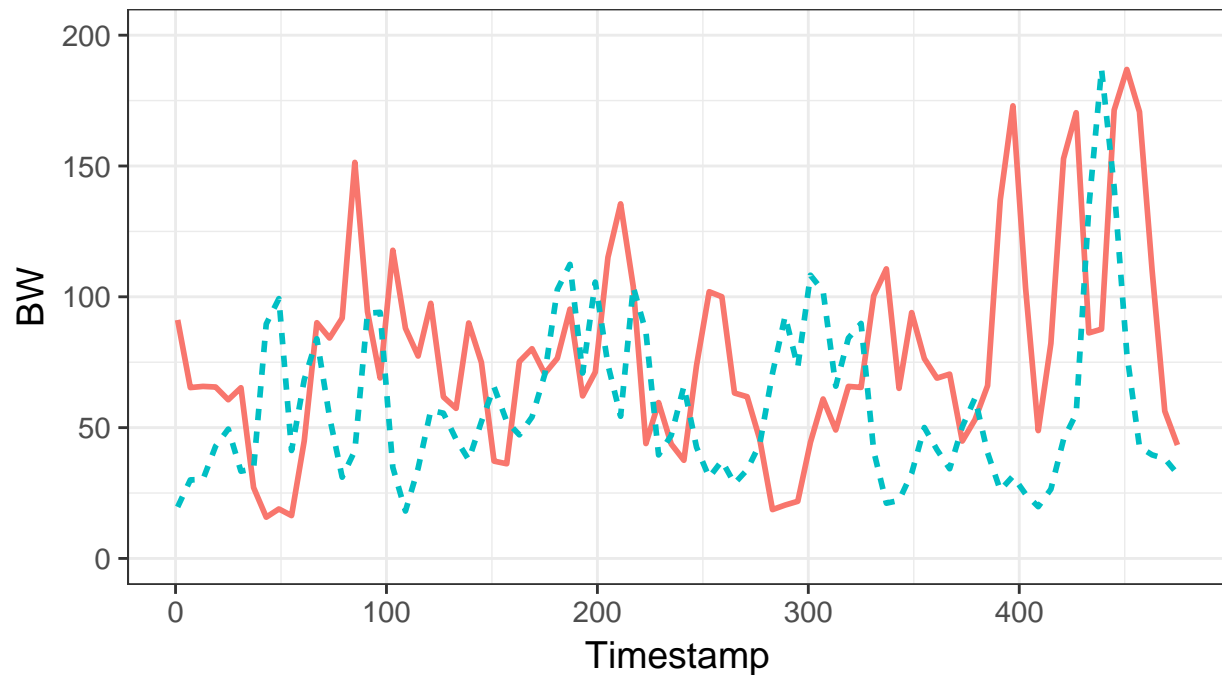
```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning: Removed 8 rows containing non-finite values (stat_smooth).
```

BSC 50 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 50 MB/s - - Tenant 2 @ 20 MB/s



```
pdf(file="BSC50_20_10i_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,200))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

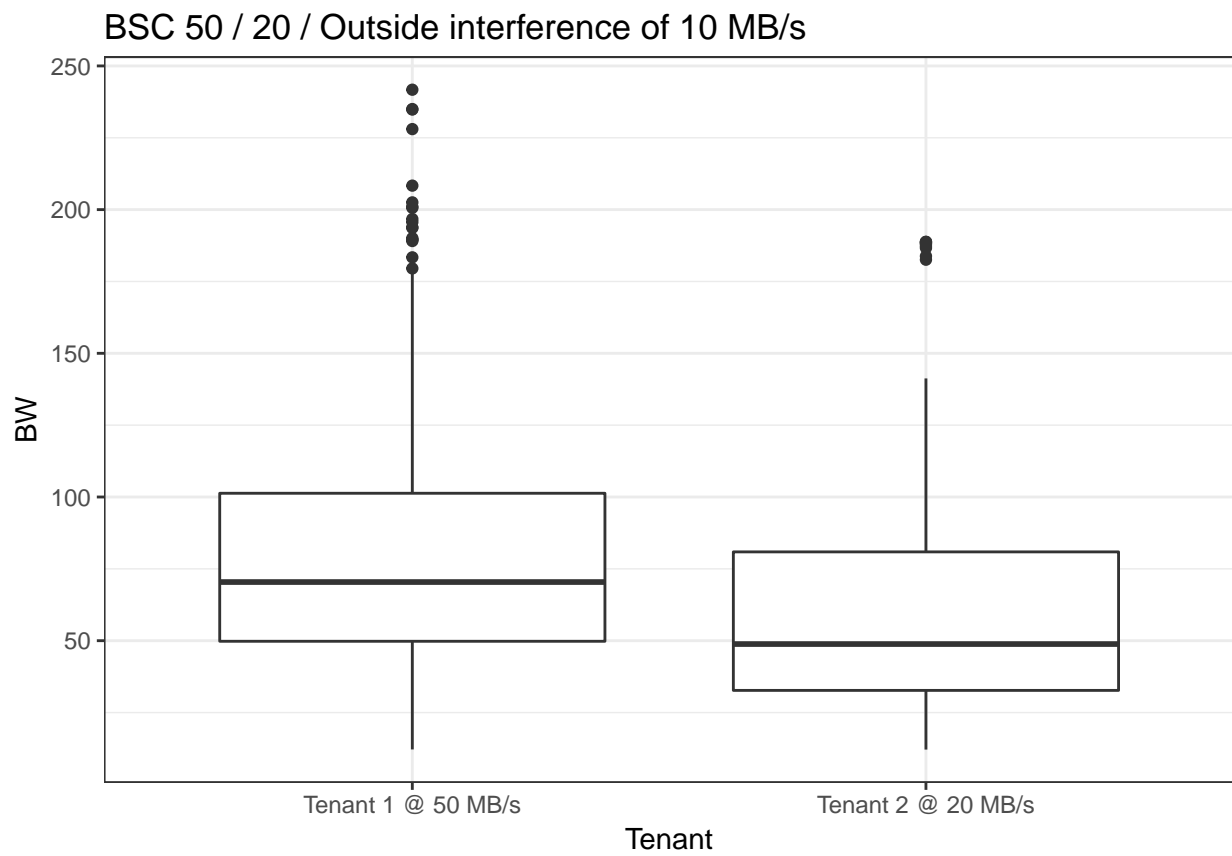
```
## Warning: Removed 8 rows containing non-finite values (stat_smooth).
```

```
dev.off()
```

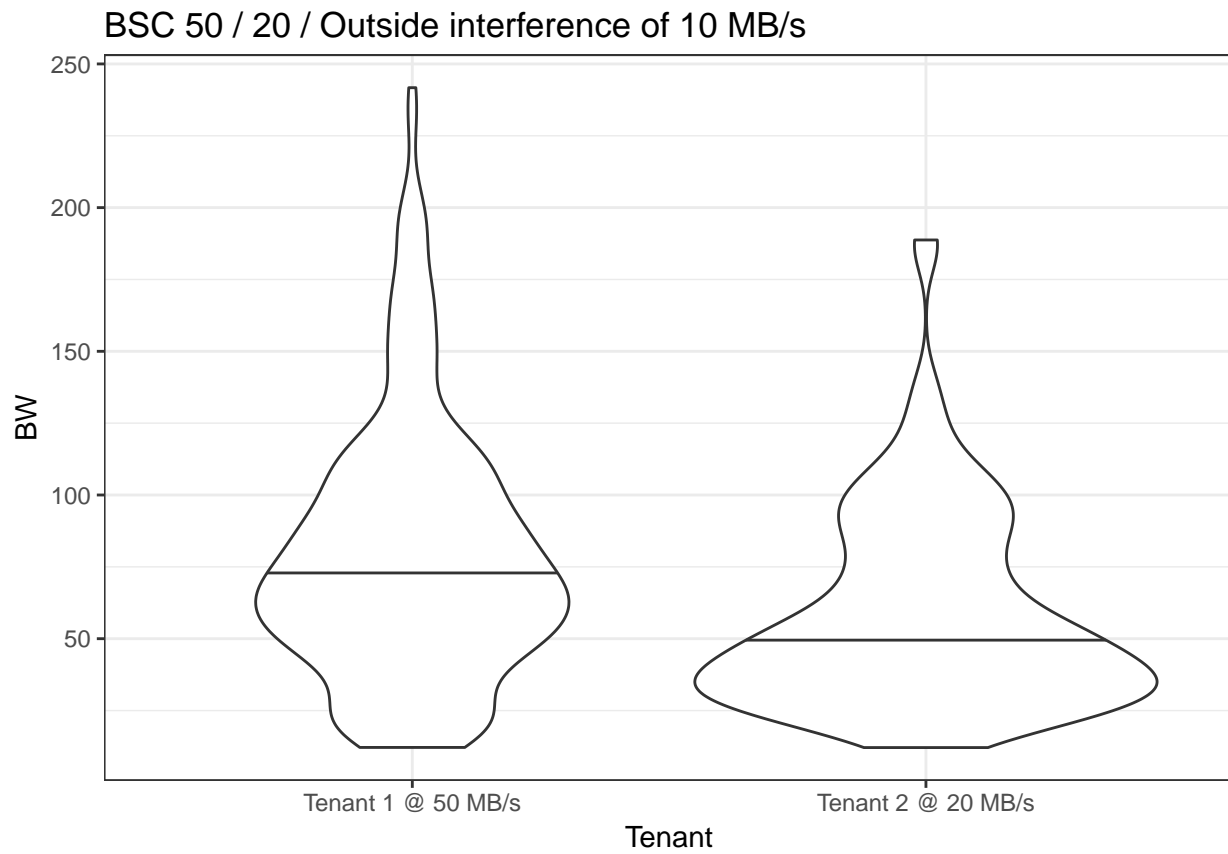
```
## pdf
```

```
## 2
```

```
draw2(dades)
```



`draw3(dades)`

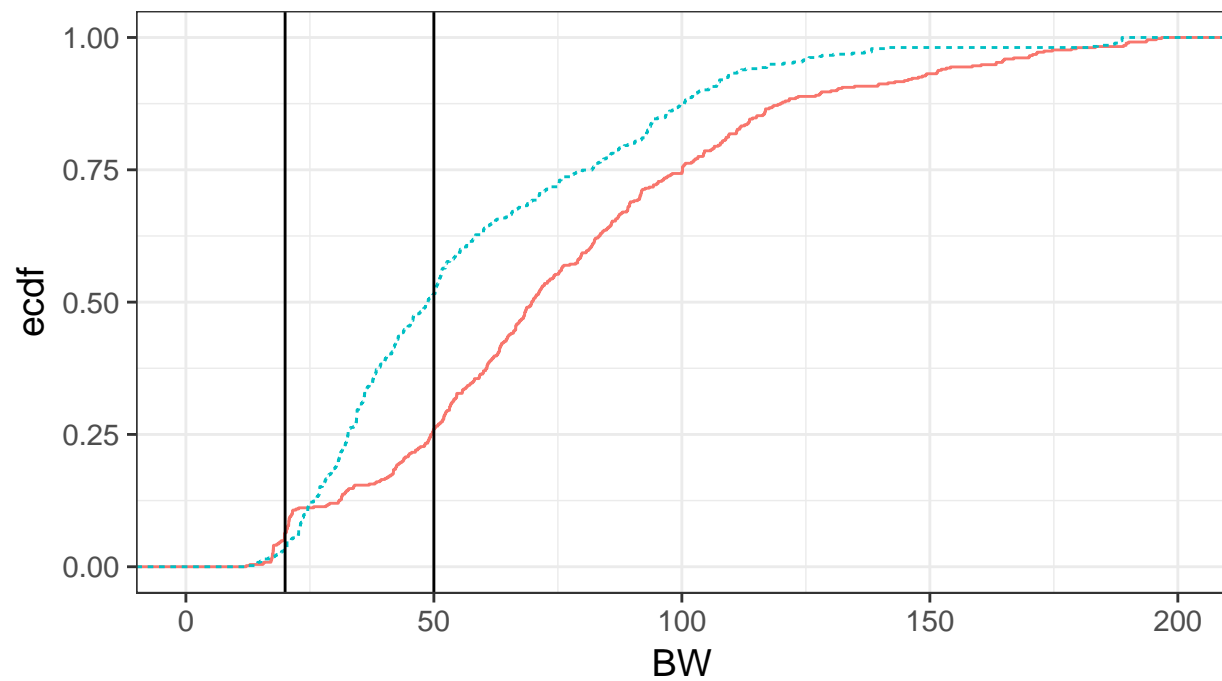


```
draw4(dades)+scale_x_continuous(limits=c(0,200))
```

```
## Warning: Removed 8 rows containing non-finite values (stat_ecdf).
```

BSC 50 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="BSC50_20_10i_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,200))
```

```
## Warning: Removed 8 rows containing non-finite values (stat_ecdf).
```

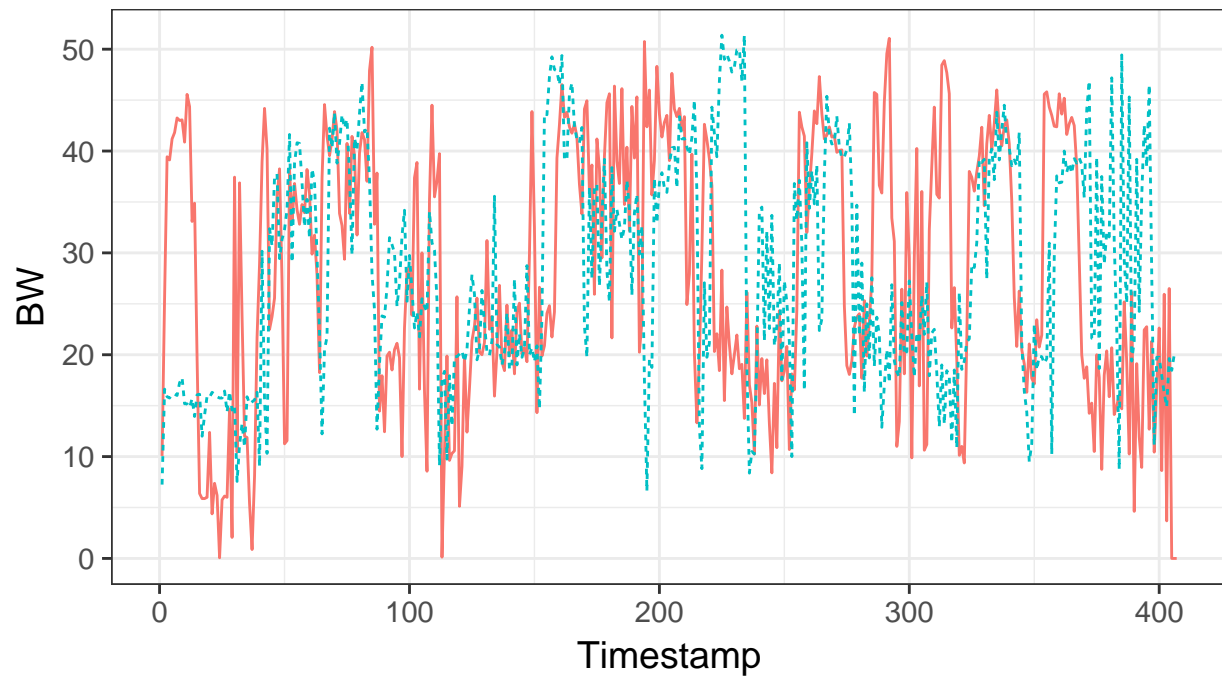
```
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log20/log20.csv","URV 50 / 50 / Outside interference of 10 MB/s ",50,50)
draw1(dades)
```

URV 50 / 50 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 50 MB/s



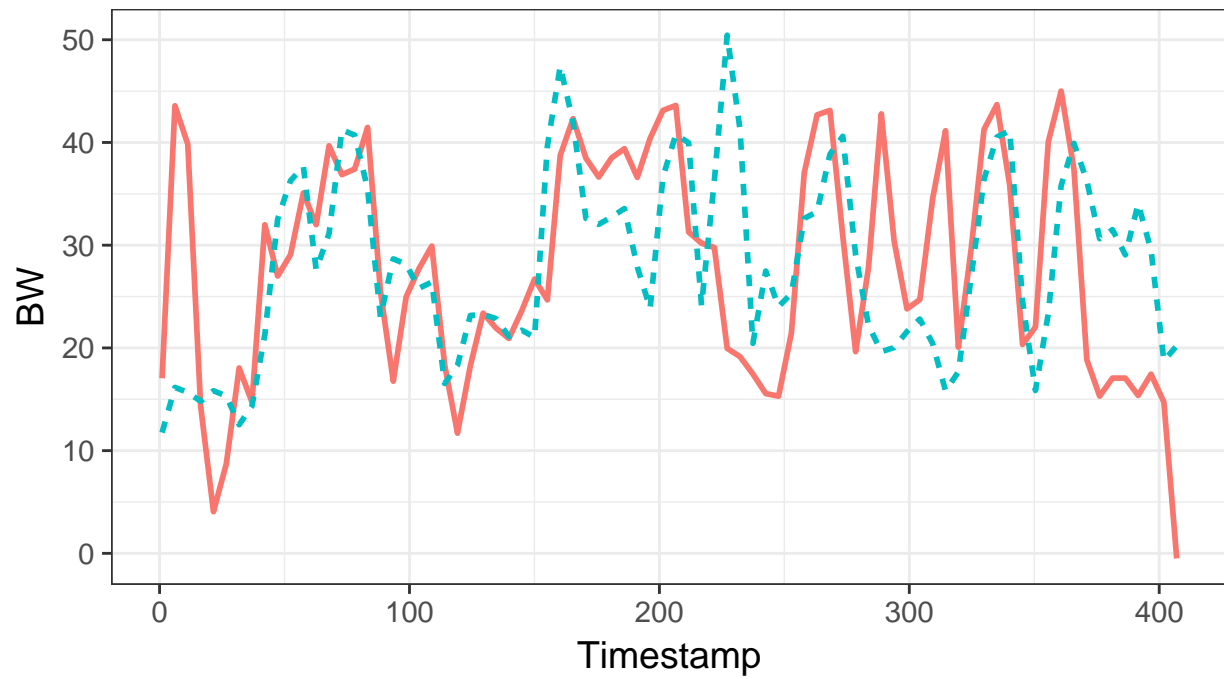
```
drawsmooth(dades)
```

```
## Warning: Ignoring unknown parameters: degree
```

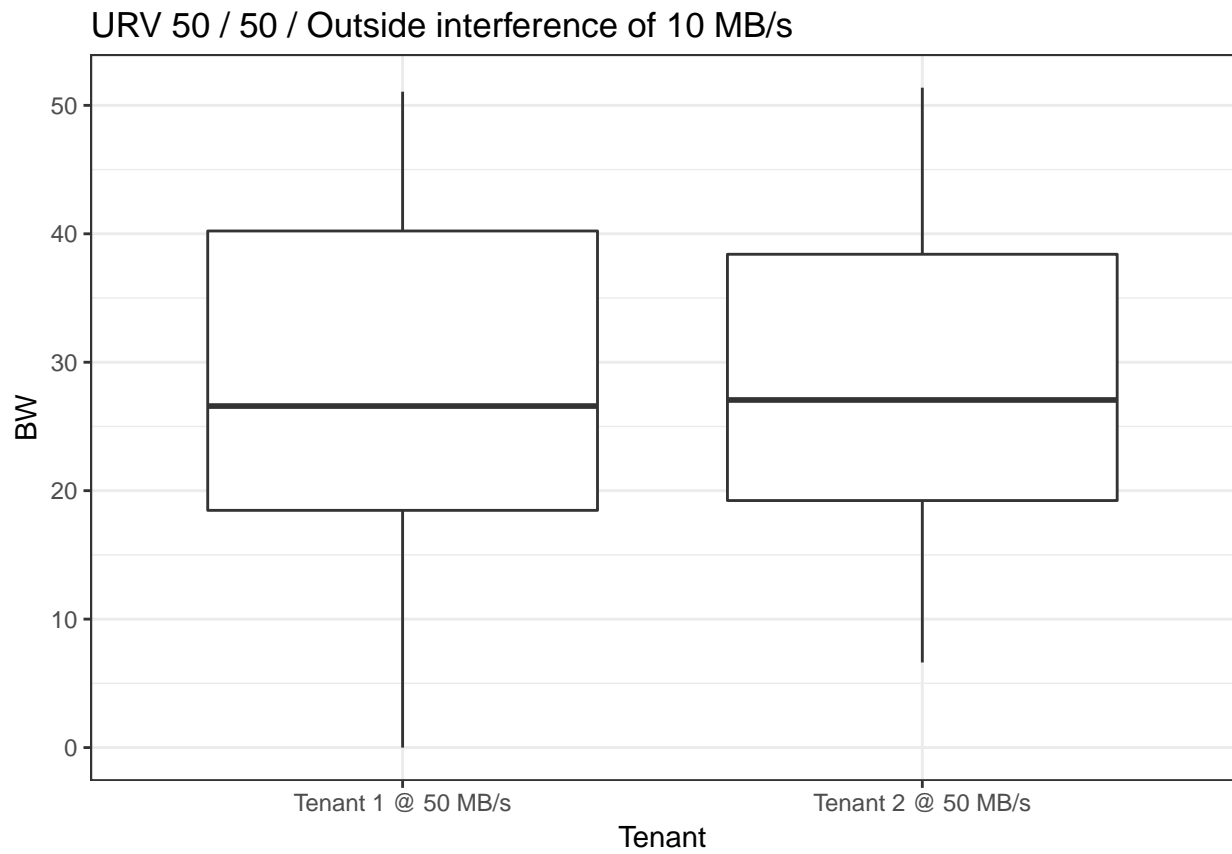
```
## `geom_smooth()` using method = 'loess'
```

URV 50 / 50 / Outside interference of 10 MB/s

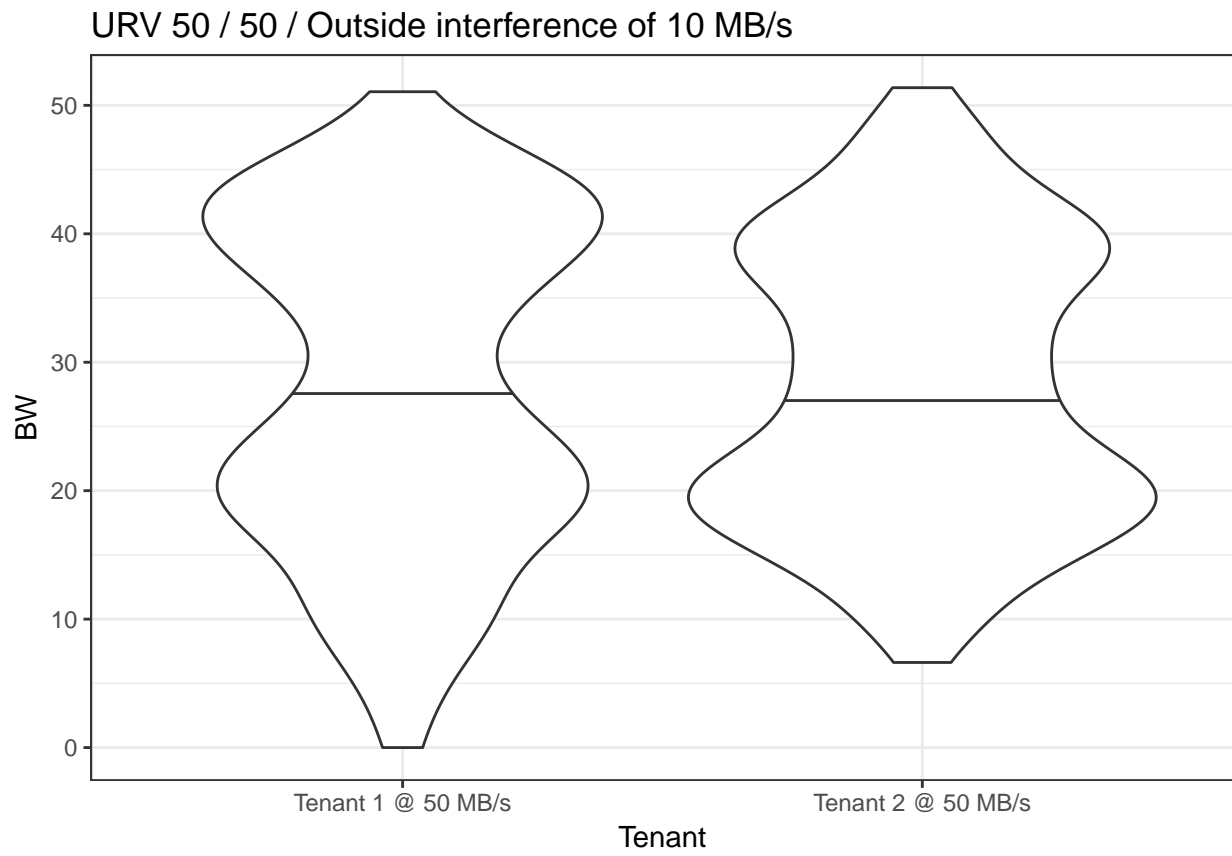
Tenant — Tenant 1 @ 50 MB/s - - Tenant 2 @ 50 MB/s



`draw2(dades)`



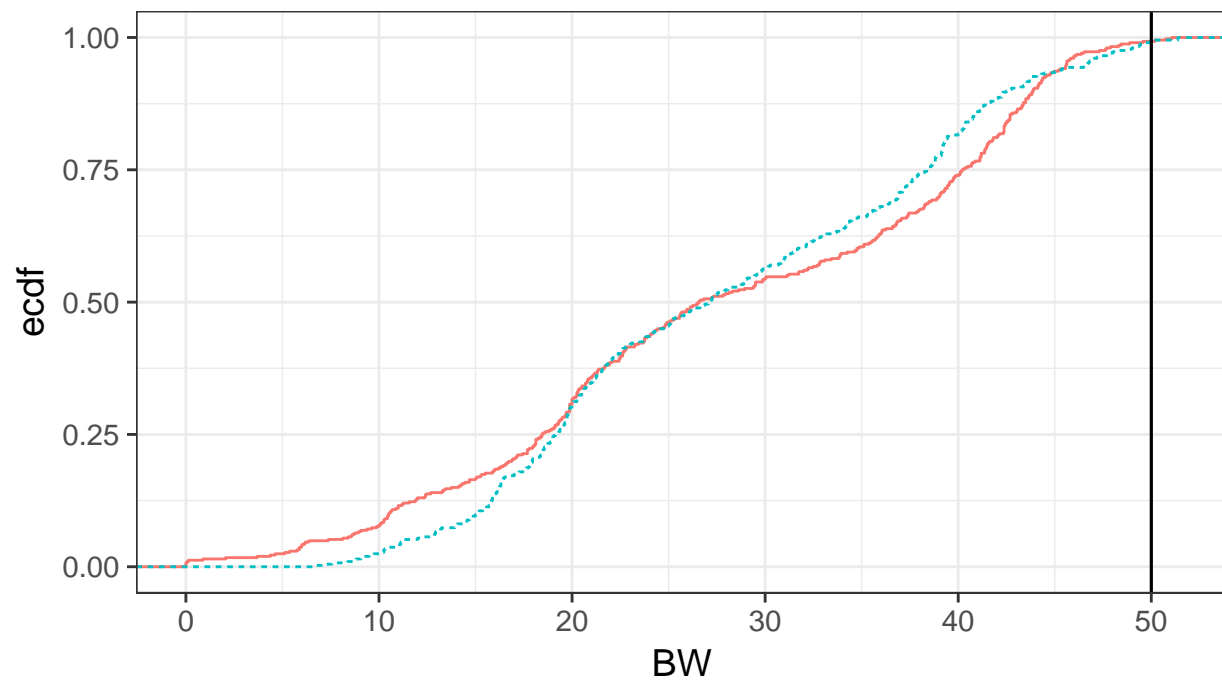
`draw3(dades)`



`draw4(dades)`

URV 50 / 50 / Outside interference of 10 MB/s

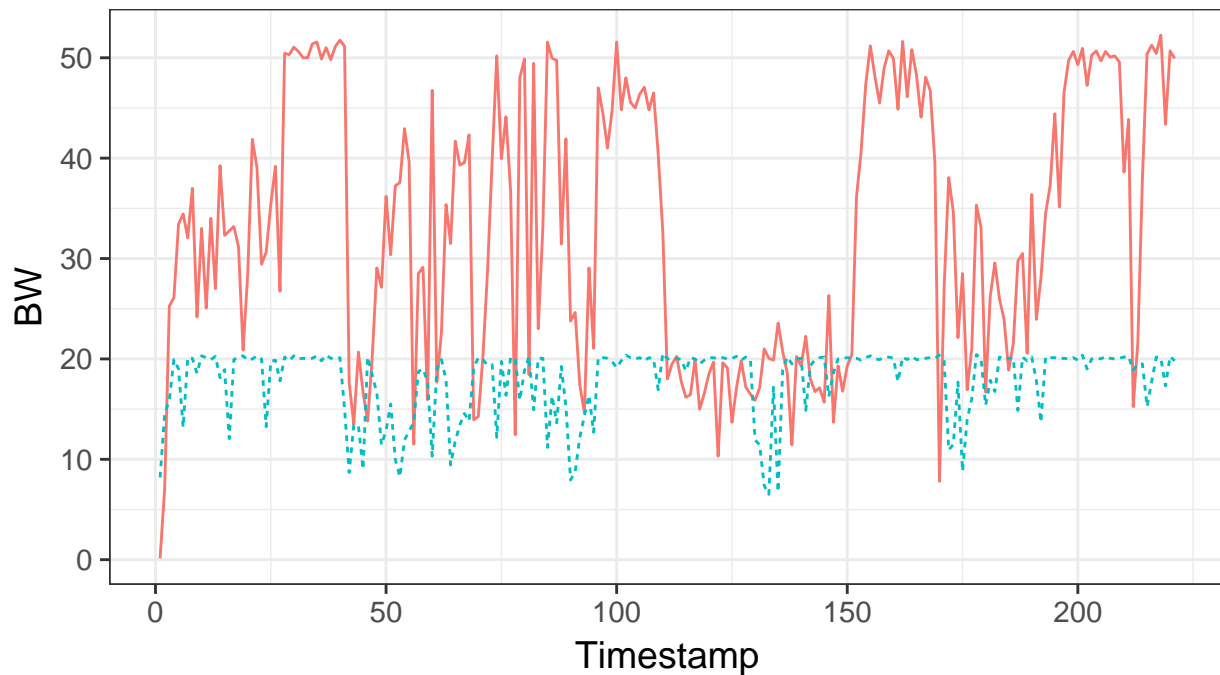
Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 50 MB/s



```
dades <- loadData("../log21/log21.csv","URV 50 / 20 / Outside interference of 20 MB/s ",50,20)
draw1(dades)
```

URV 50 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s

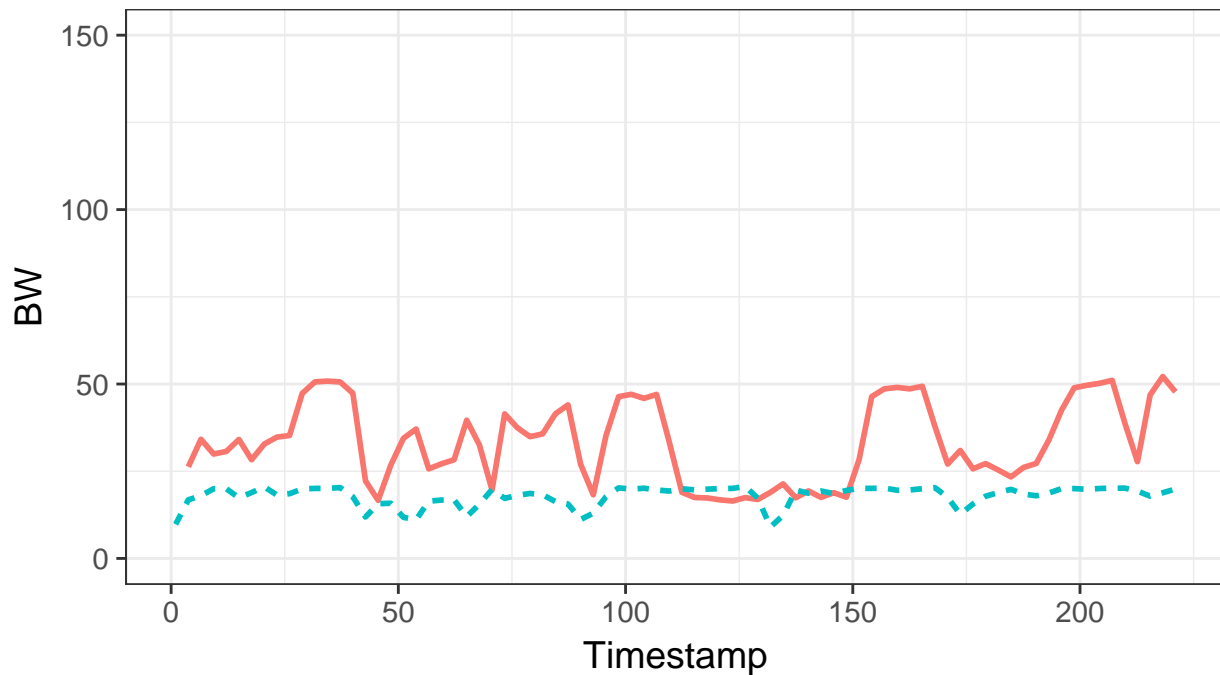


```
drawsmooth(dades)+scale_y_continuous(limits=c(0,150))
```

```
## Warning: Ignoring unknown parameters: degree
## `geom_smooth()` using method = 'loess'
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 221
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 221
## Warning: Removed 1 rows containing missing values (geom_smooth).
```

URV 50 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="URV50_20_20i_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,150))
```

```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =  
## parametric, : k-d tree limited by memory. ncmx= 221
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =  
## parametric, : k-d tree limited by memory. ncmx= 221
```

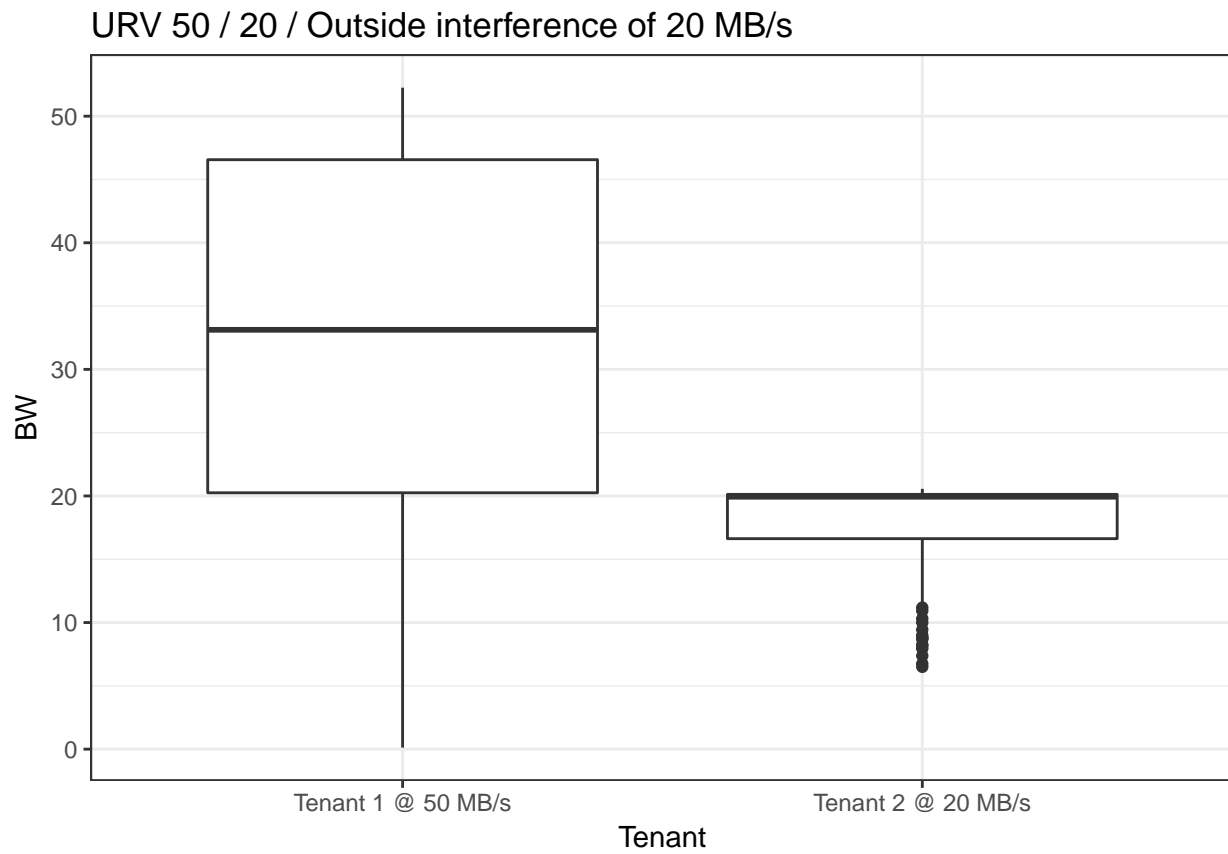
```
## Warning: Removed 1 rows containing missing values (geom_smooth).
```

```
dev.off()
```

```
## pdf
```

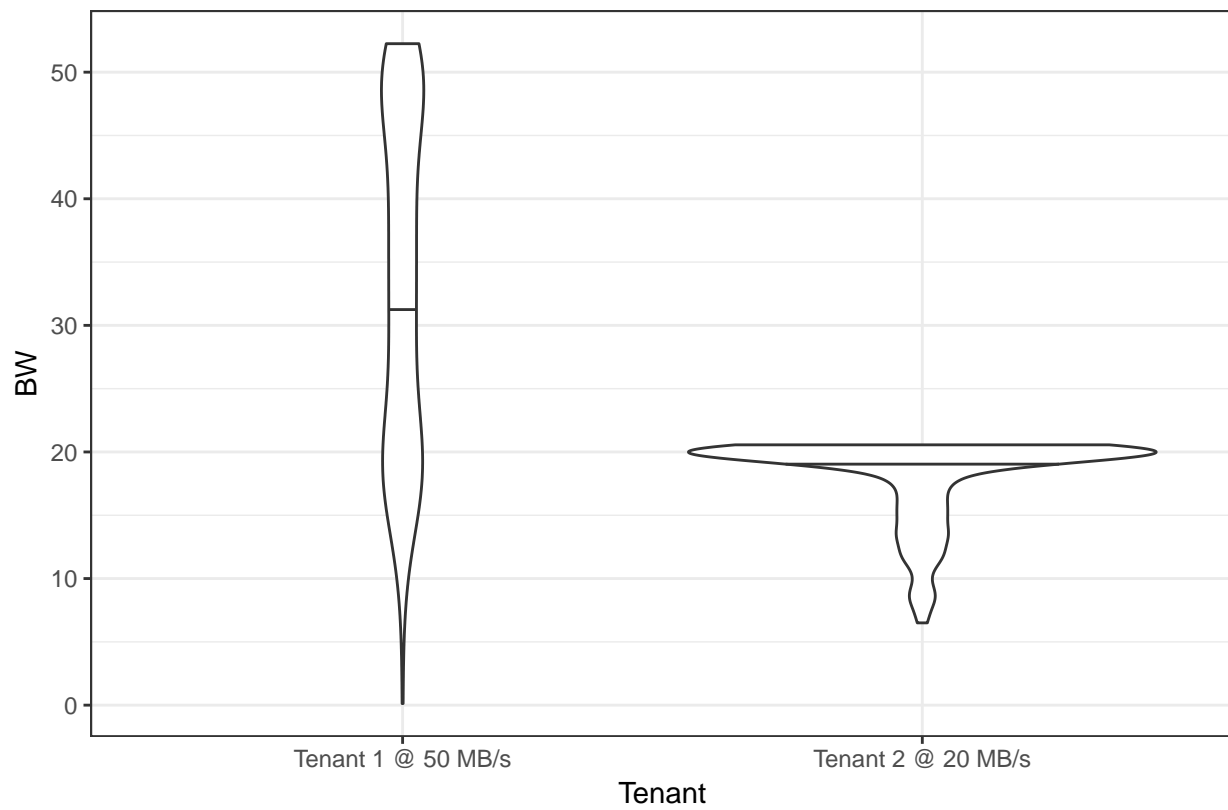
```
## 2
```

```
draw2(dades)
```



`draw3(dades)`

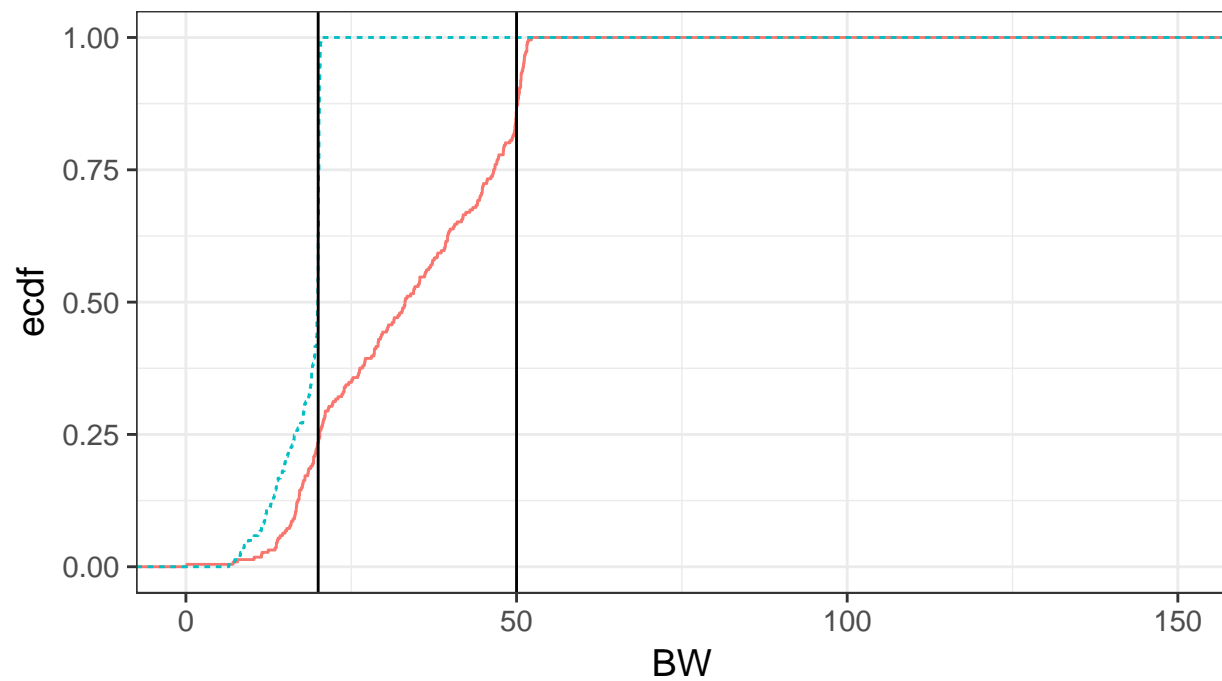
URV 50 / 20 / Outside interference of 20 MB/s



```
draw4(dades)+scale_x_continuous(limits=c(0,150))
```

URV 50 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="URV50_20_20i_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,150))
dev.off()
```

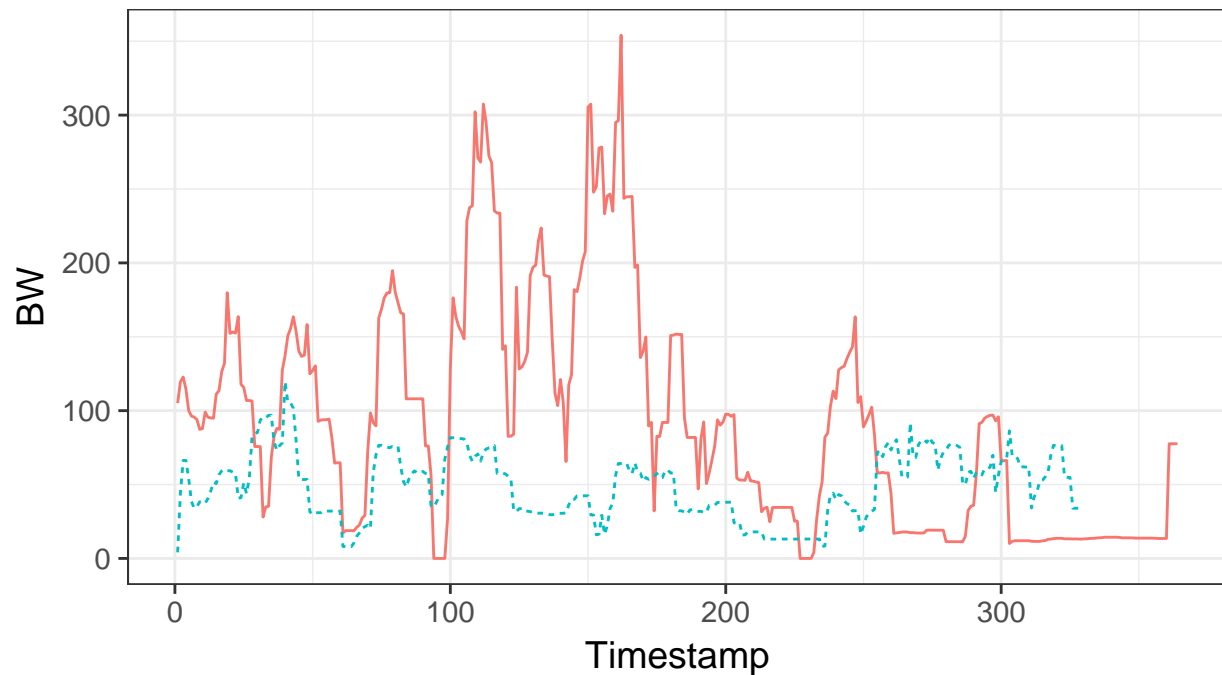
```
## pdf
## 2
```

```
dades <- loadData("../log36/log36.csv","BSC 50 / 20 / Outside interference of 20 MB/s",50,20)
draw1(dades)
```

```
## Warning: Removed 36 rows containing missing values (geom_path).
```

BSC 50 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s

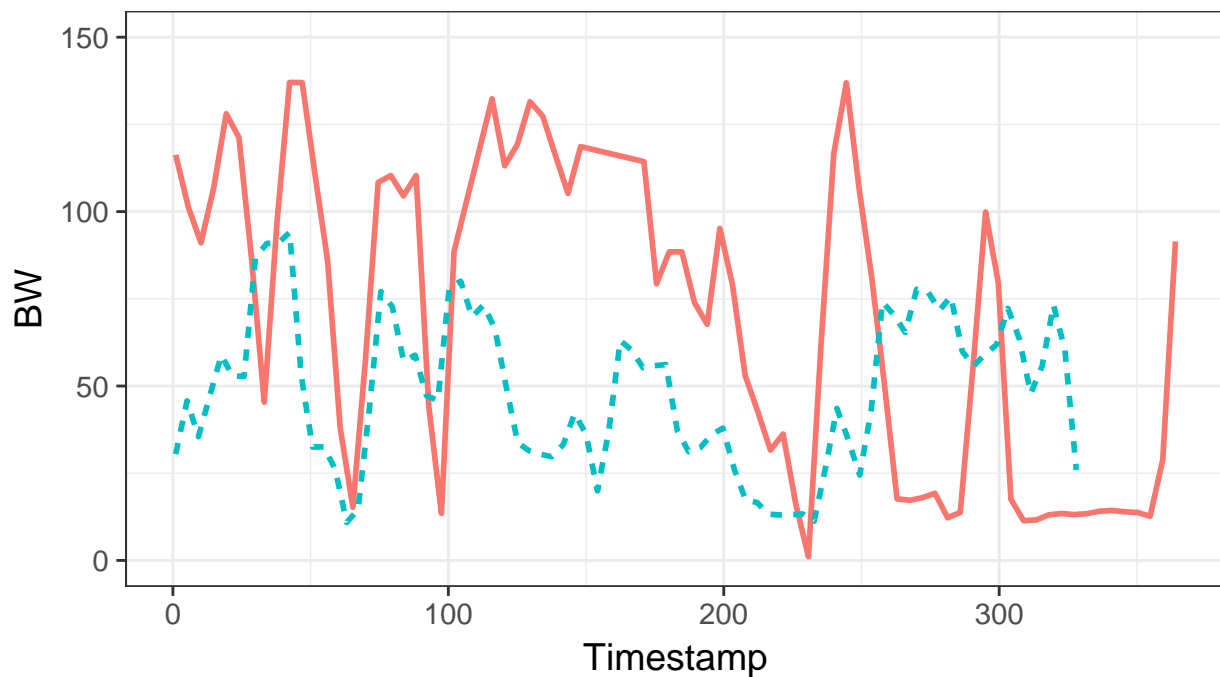


```
drawsmooth(dades)+scale_y_continuous(limits=c(0,150))
```

```
## Warning: Ignoring unknown parameters: degree
## `geom_smooth()` using method = 'loess'
## Warning: Removed 112 rows containing non-finite values (stat_smooth).
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 288
## Warning: Removed 6 rows containing missing values (geom_smooth).
```


BSC 50 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="BSC50_20_20i_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,150))
```

```
## Warning: Ignoring unknown parameters: degree
## `geom_smooth()` using method = 'loess'
## Warning: Removed 112 rows containing non-finite values (stat_smooth).
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmx= 288
## Warning: Removed 6 rows containing missing values (geom_smooth).
```

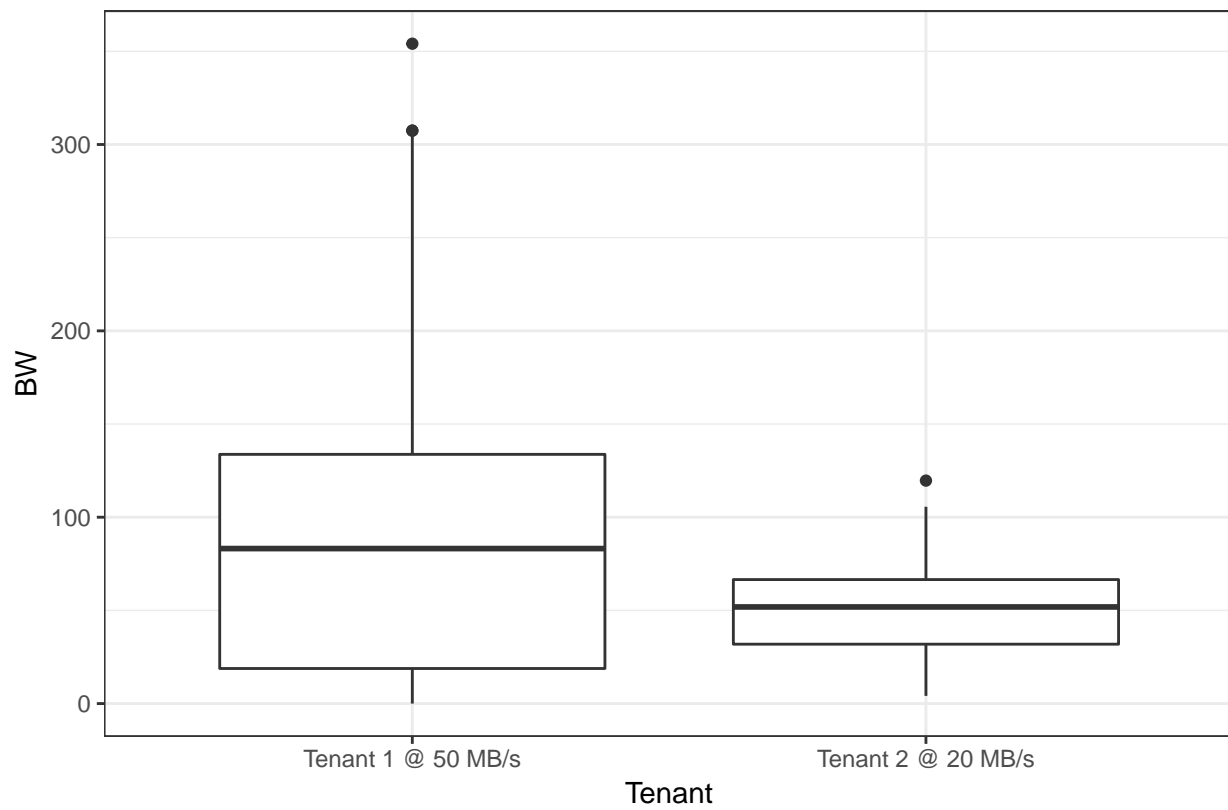
```
dev.off()
```

```
## pdf
## 2
```

```
draw2(dades)
```

```
## Warning: Removed 36 rows containing non-finite values (stat_boxplot).
```

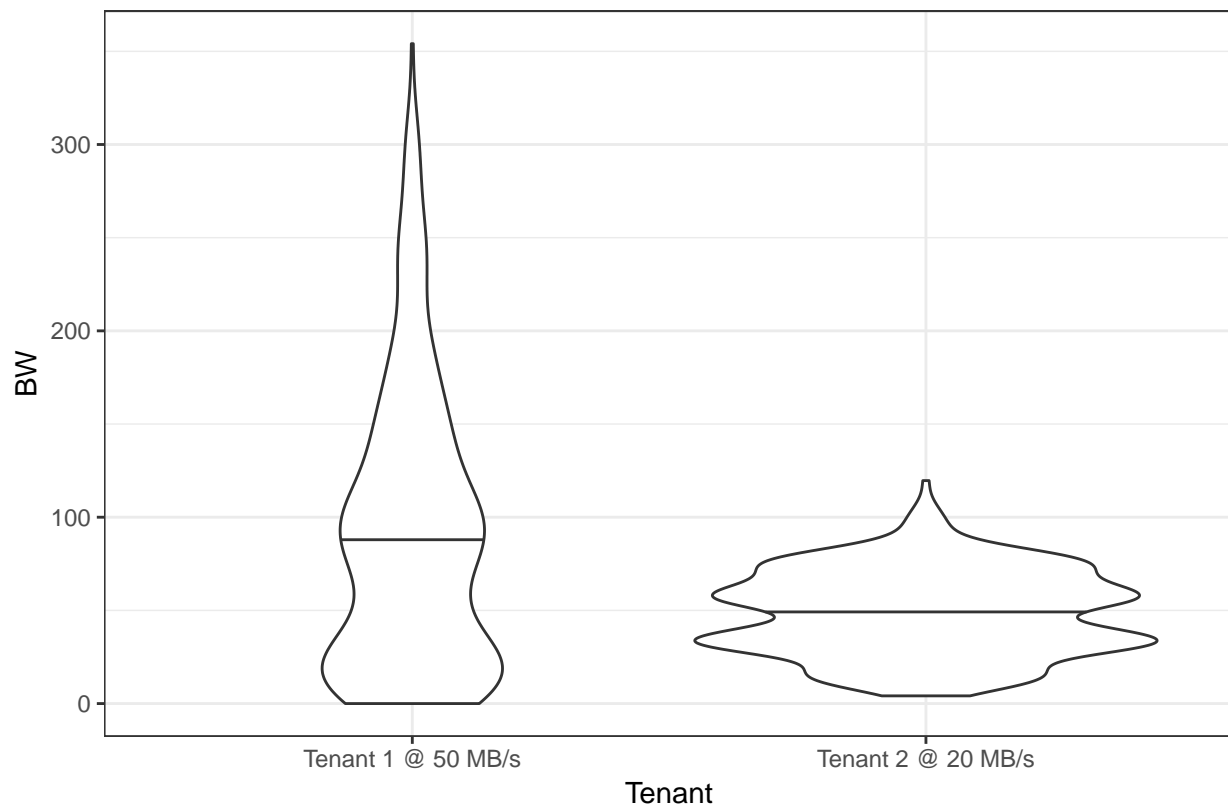
BSC 50 / 20 / Outside interference of 20 MB/s



```
draw3(dades)
```

```
## Warning: Removed 36 rows containing non-finite values (stat_ydensity).
```

BSC 50 / 20 / Outside interference of 20 MB/s

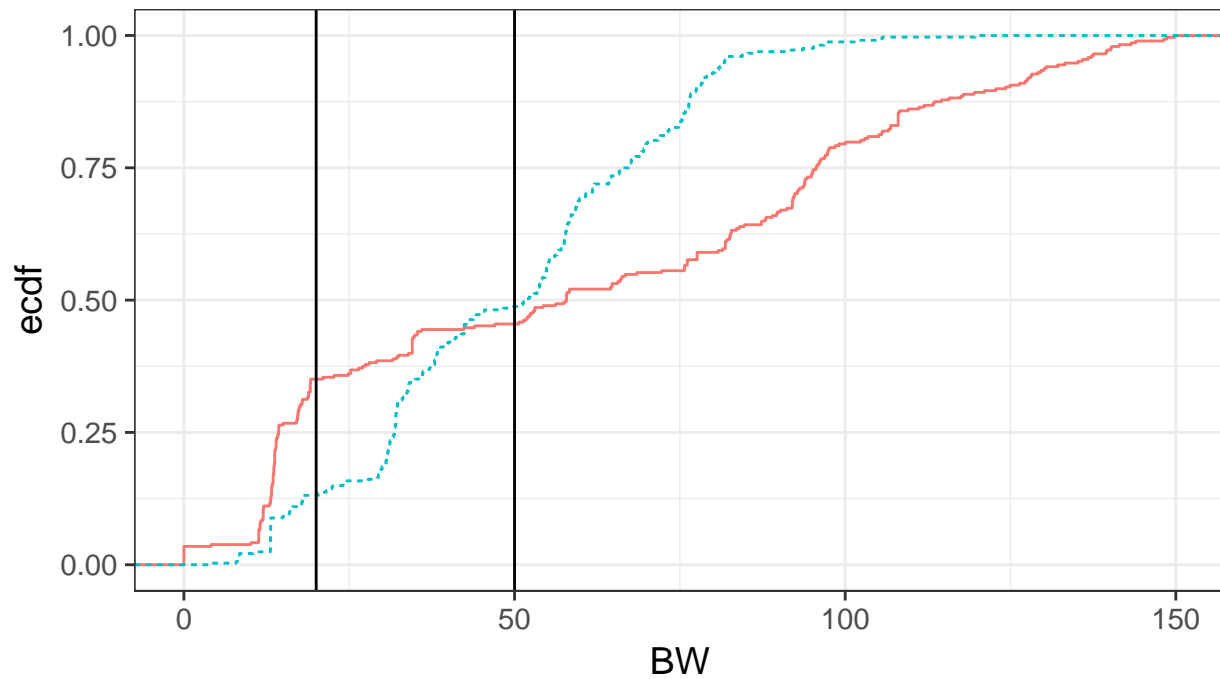


```
draw4(dades)+scale_x_continuous(limits=c(0,150))
```

```
## Warning: Removed 112 rows containing non-finite values (stat_ecdf).
```

BSC 50 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 50 MB/s - - - Tenant 2 @ 20 MB/s



```
pdf(file="BSC50_20_20i_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,150))
```

```
## Warning: Removed 112 rows containing non-finite values (stat_ecdf).
```

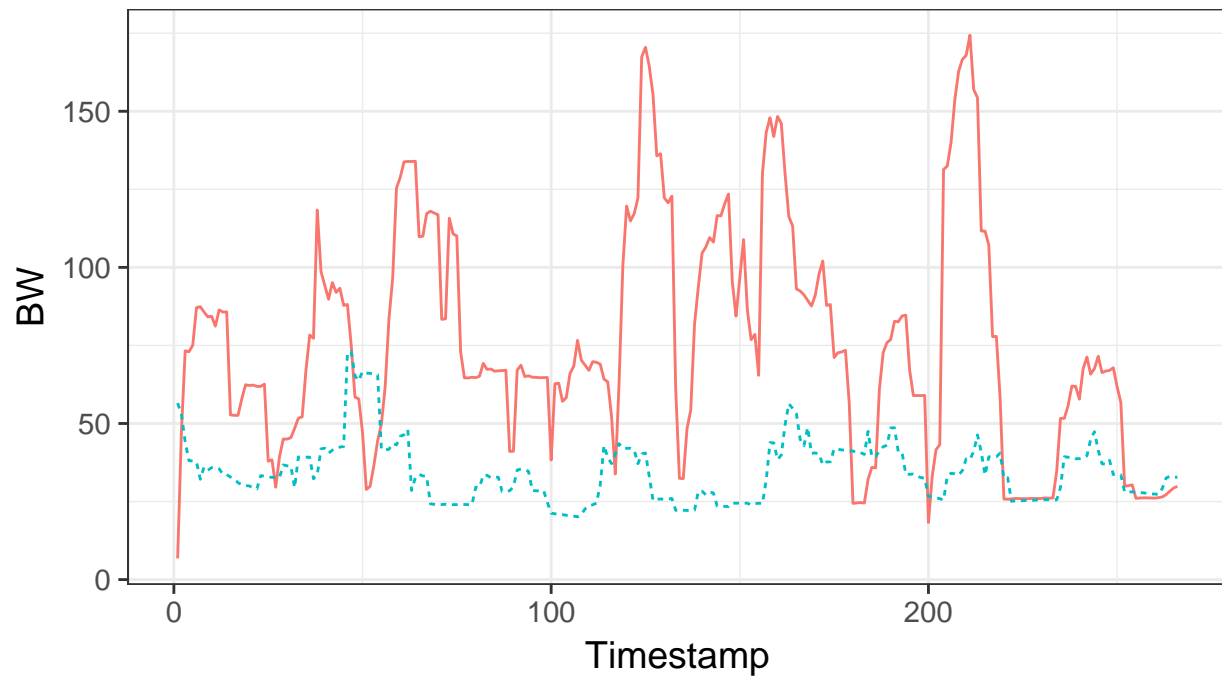
```
dev.off()
```

```
## pdf
## 2
```

```
dades <- loadData("../log32/log32.csv","BSC 100 / 20 / Outside interference of 20 MB/s",20,100)
draw1(dades)
```

BSC 100 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s

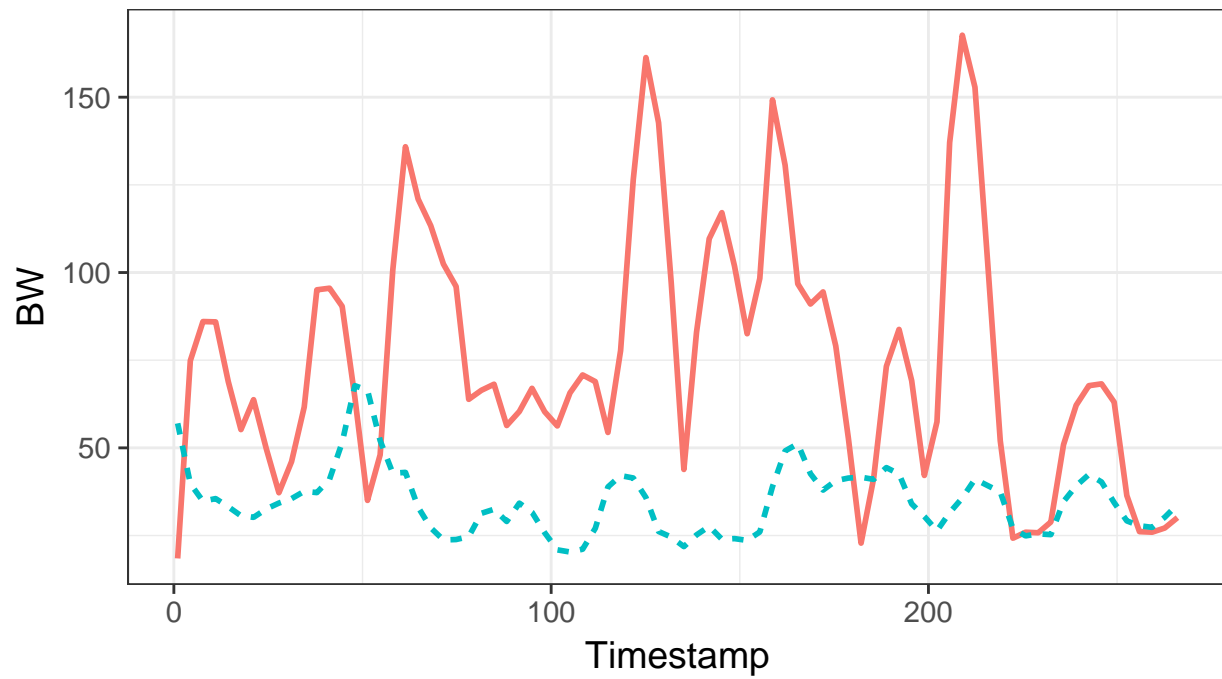


```
drawsmooth(dades)
```

```
## Warning: Ignoring unknown parameters: degree
## `geom_smooth()` using method = 'loess'
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmx= 266
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmx= 266
```

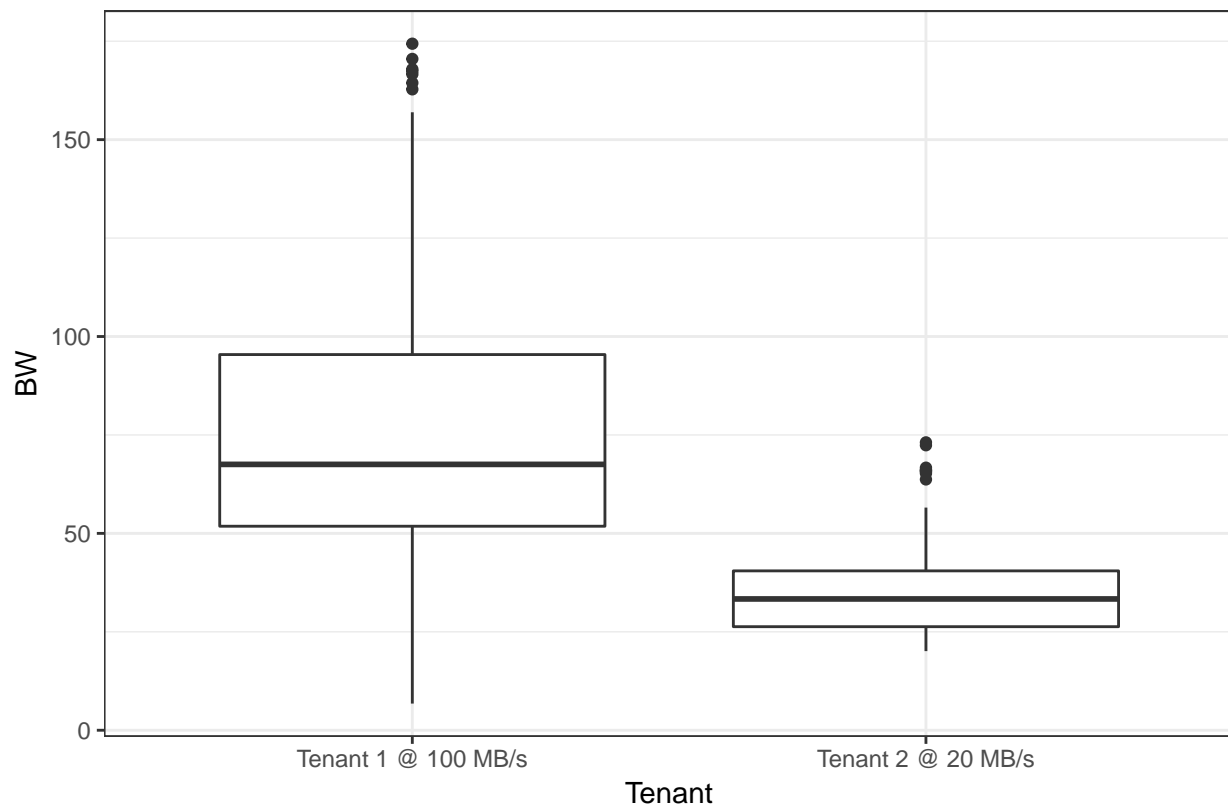
BSC 100 / 20 / Outside interference of 20 MB/s

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



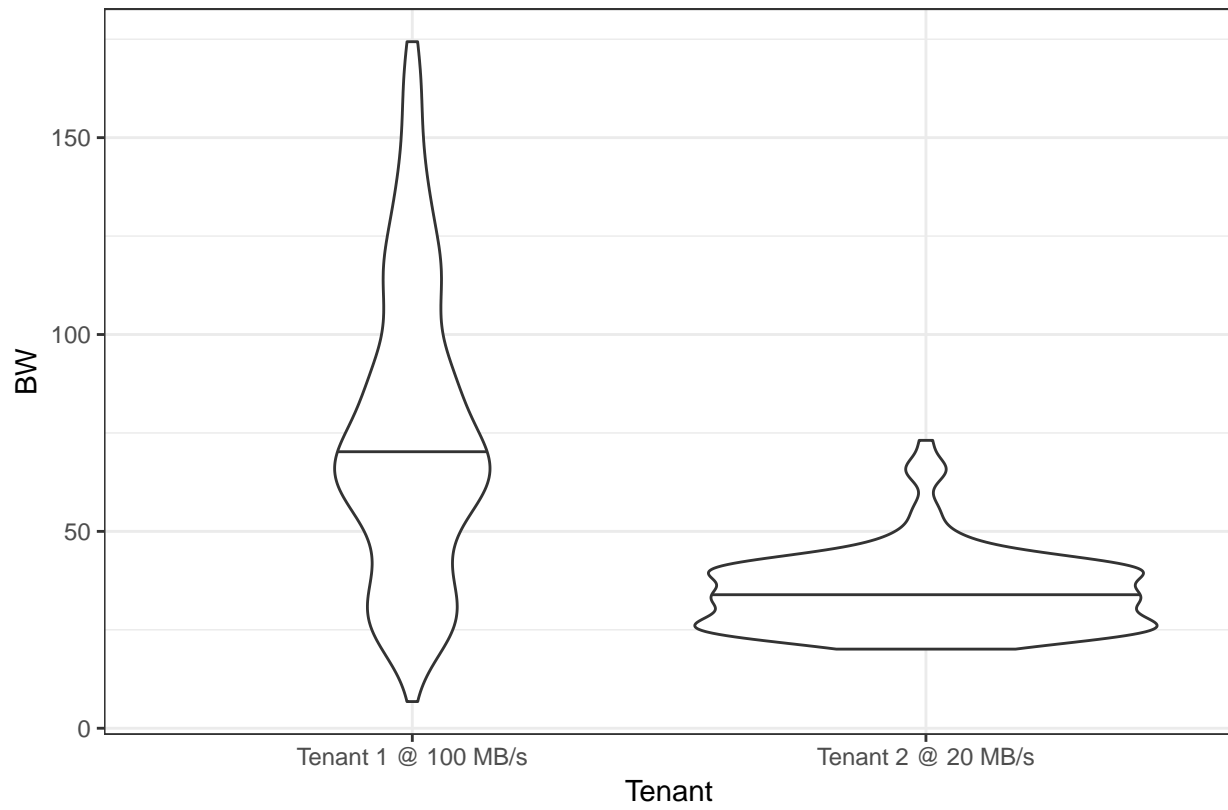
`draw2(dades)`

BSC 100 / 20 / Outside interference of 20 MB/s



`draw3(dades)`

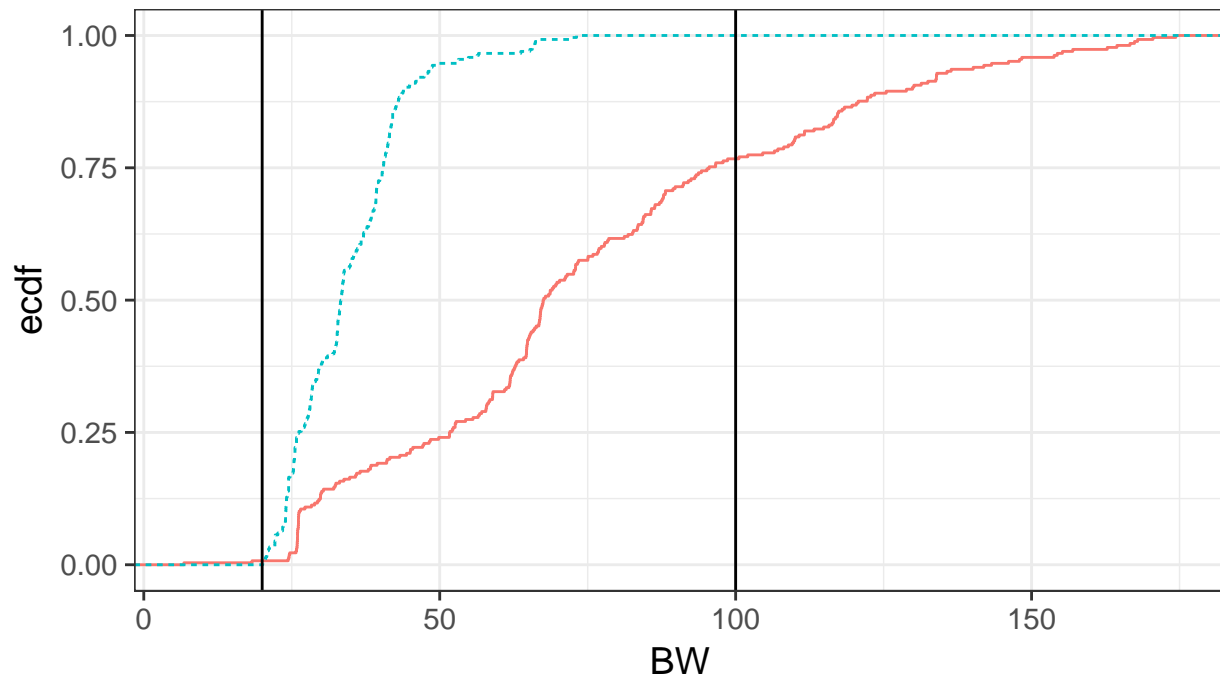
BSC 100 / 20 / Outside interference of 20 MB/s



`draw4(dades)`

BSC 100 / 20 / Outside interference of 20 MB/s

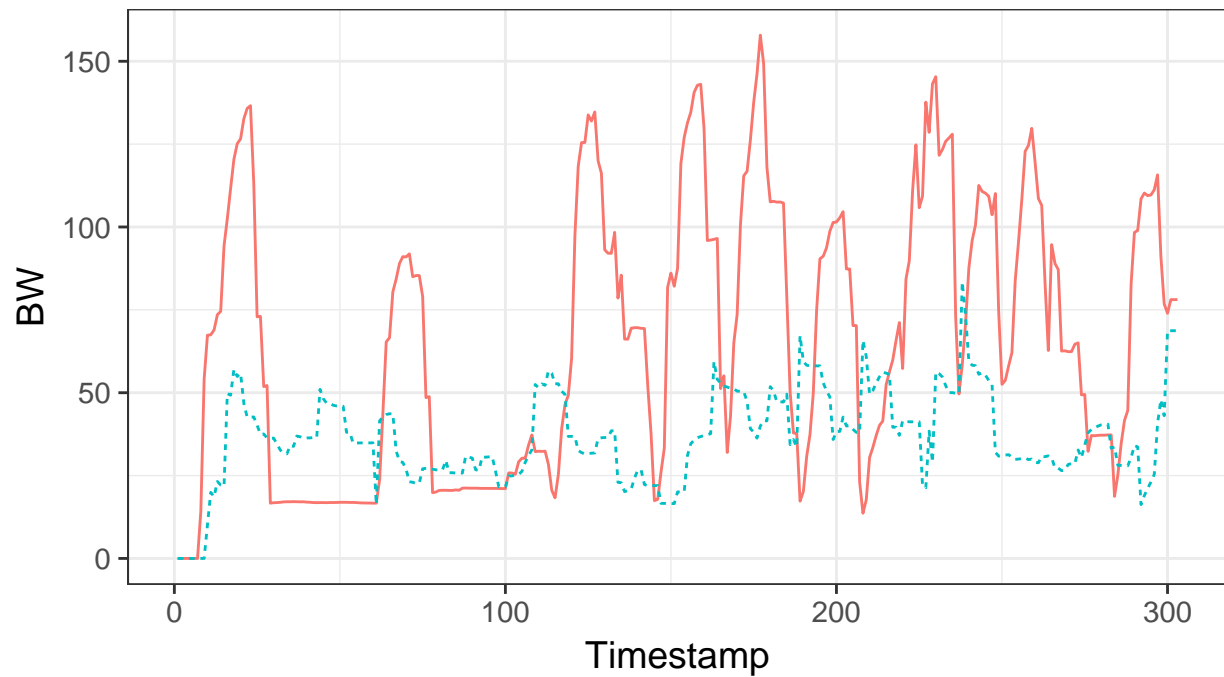
Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



```
dades <- loadData("../log29/log29.csv","BSC 100 / 20 / Outside interference of 10 MB/s",20,100)
draw1(dades)
```

BSC 100 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s

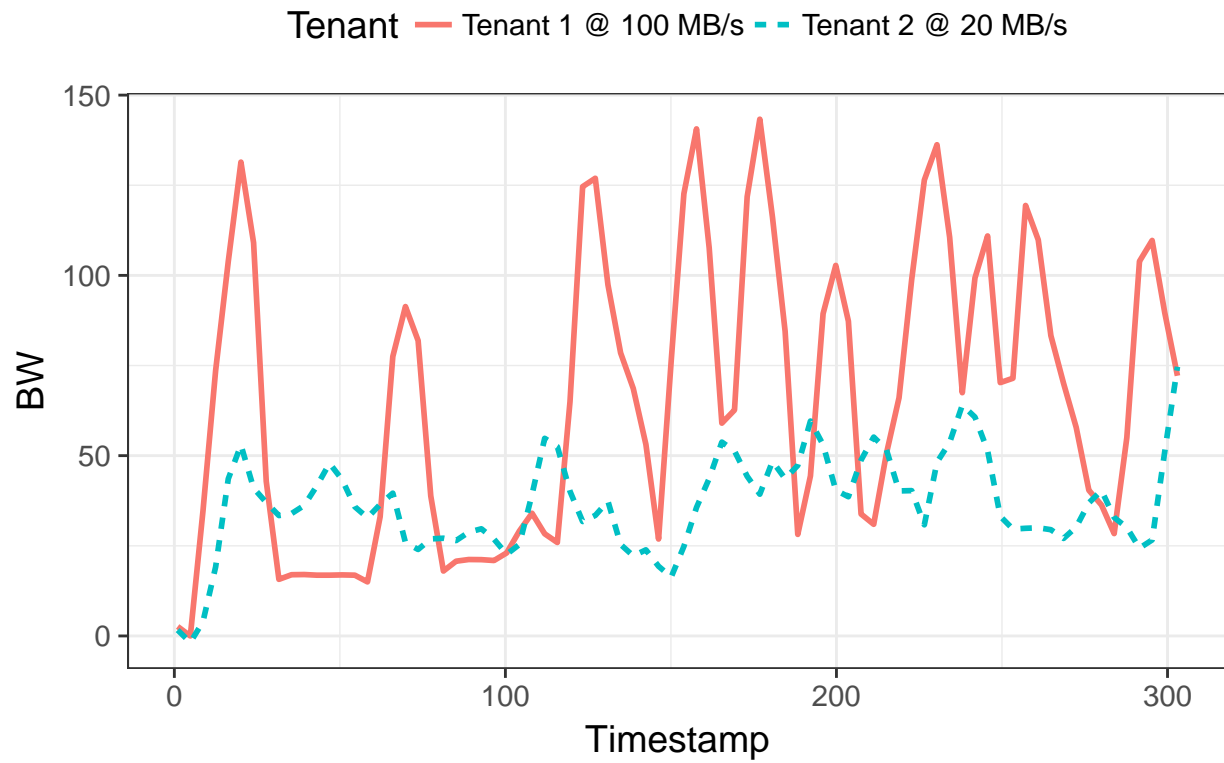


```
drawsmooth(dades)
```

```
## Warning: Ignoring unknown parameters: degree
```

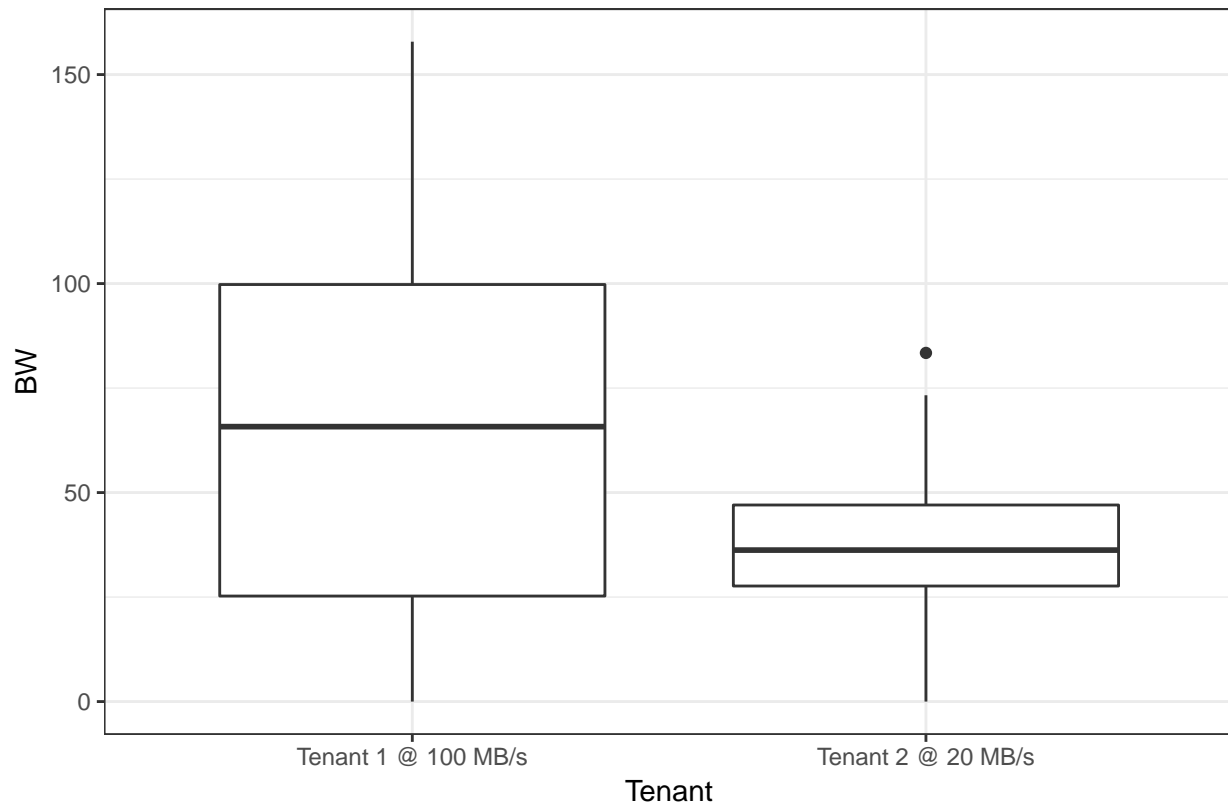
```
## `geom_smooth()` using method = 'loess'
```

BSC 100 / 20 / Outside interference of 10 MB/s



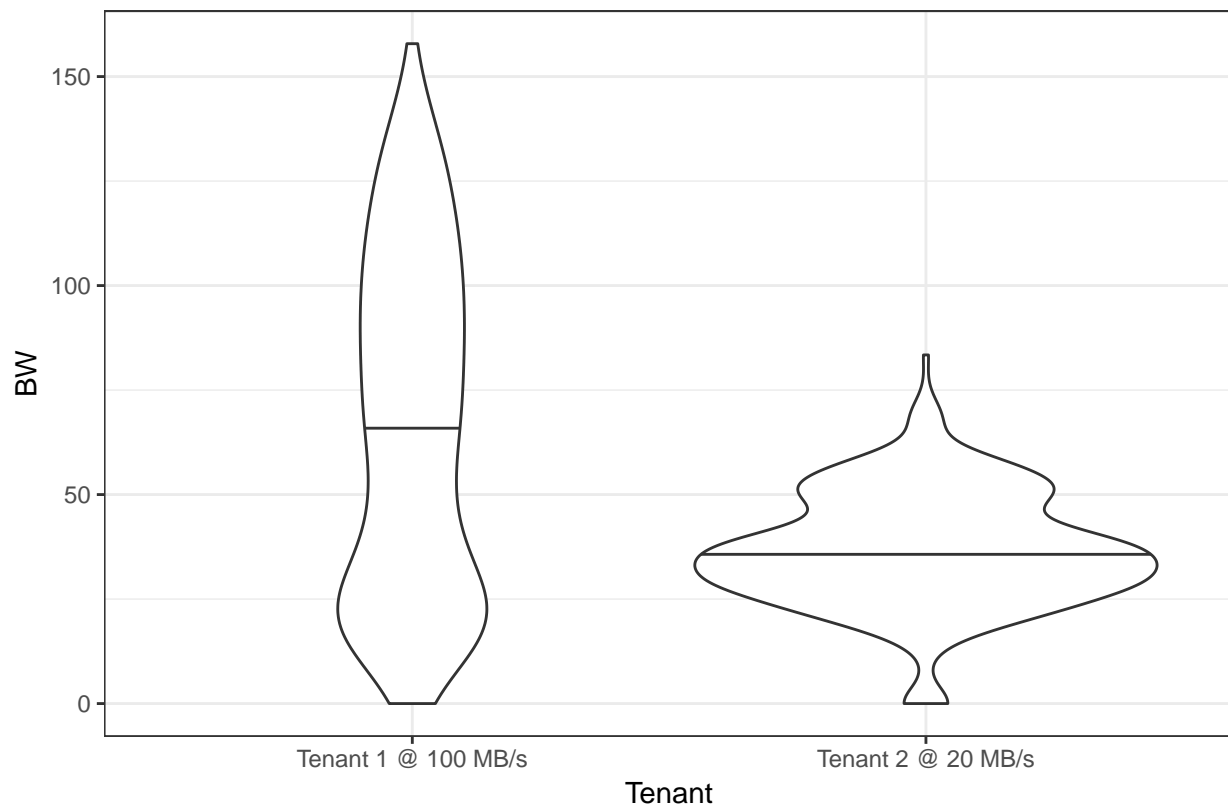
`draw2(dades)`

BSC 100 / 20 / Outside interference of 10 MB/s



`draw3(dades)`

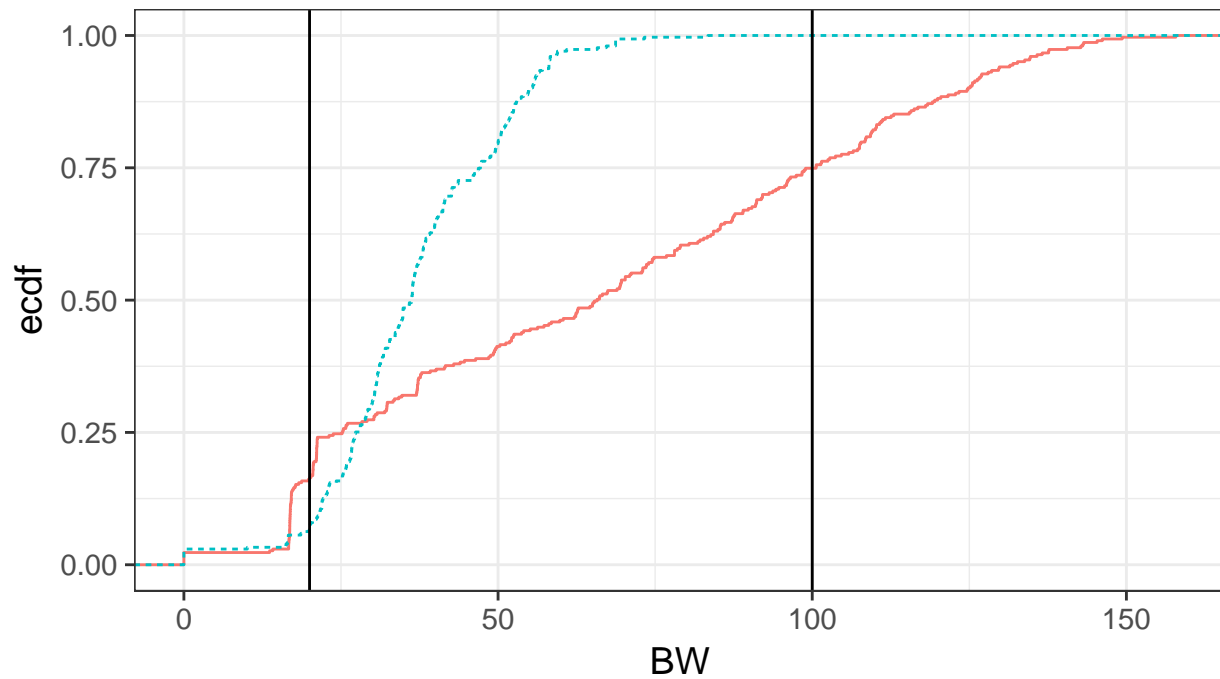
BSC 100 / 20 / Outside interference of 10 MB/s



`draw4(dades)`

BSC 100 / 20 / Outside interference of 10 MB/s

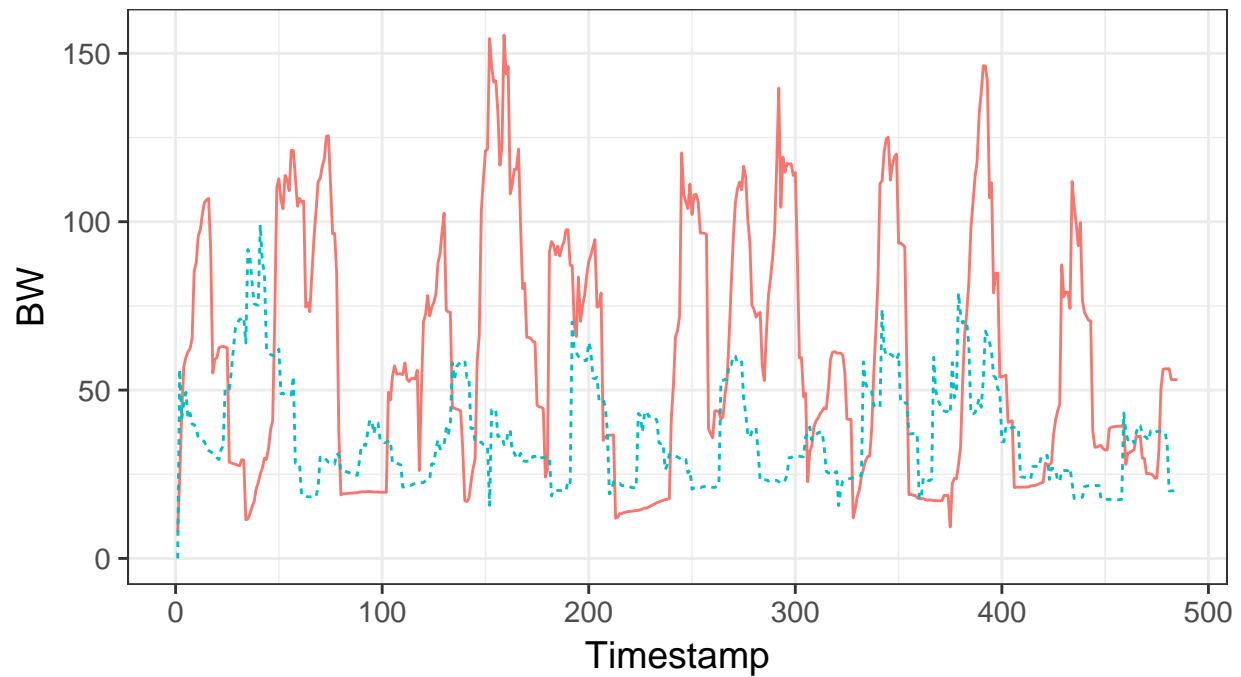
Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



```
dades <- loadData("../log30/log30.csv","BSC 100 / 20 / Outside interference of 10 MB/s",20,100)
draw1(dades)
```

BSC 100 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



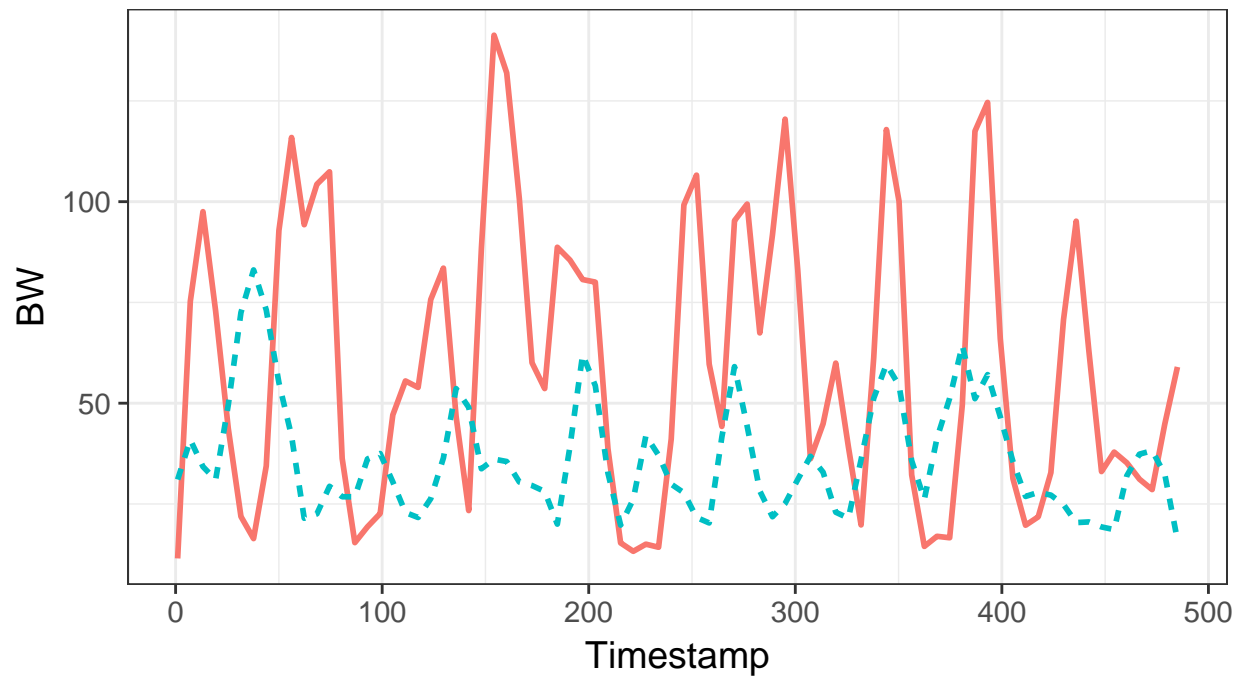
```
drawsmooth(dades)
```

```
## Warning: Ignoring unknown parameters: degree
```

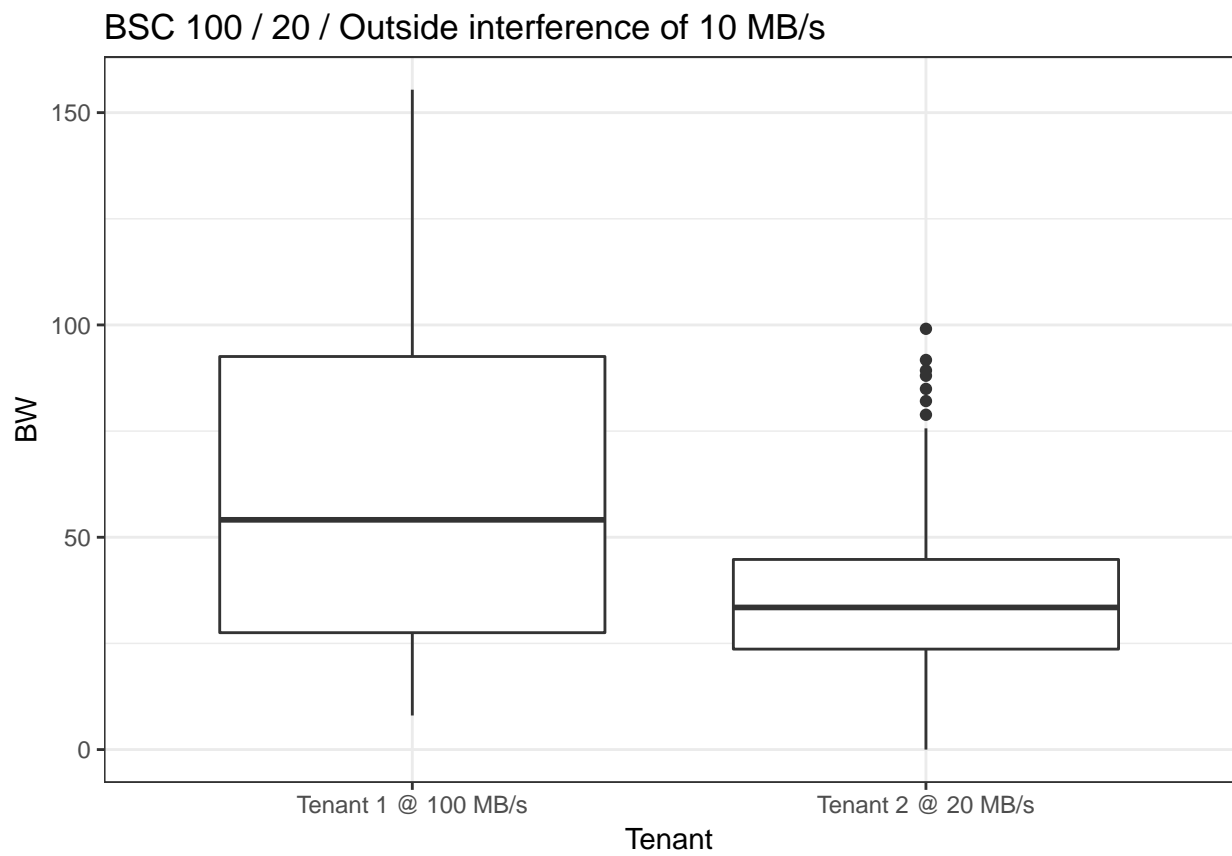
```
## `geom_smooth()` using method = 'loess'
```

BSC 100 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s

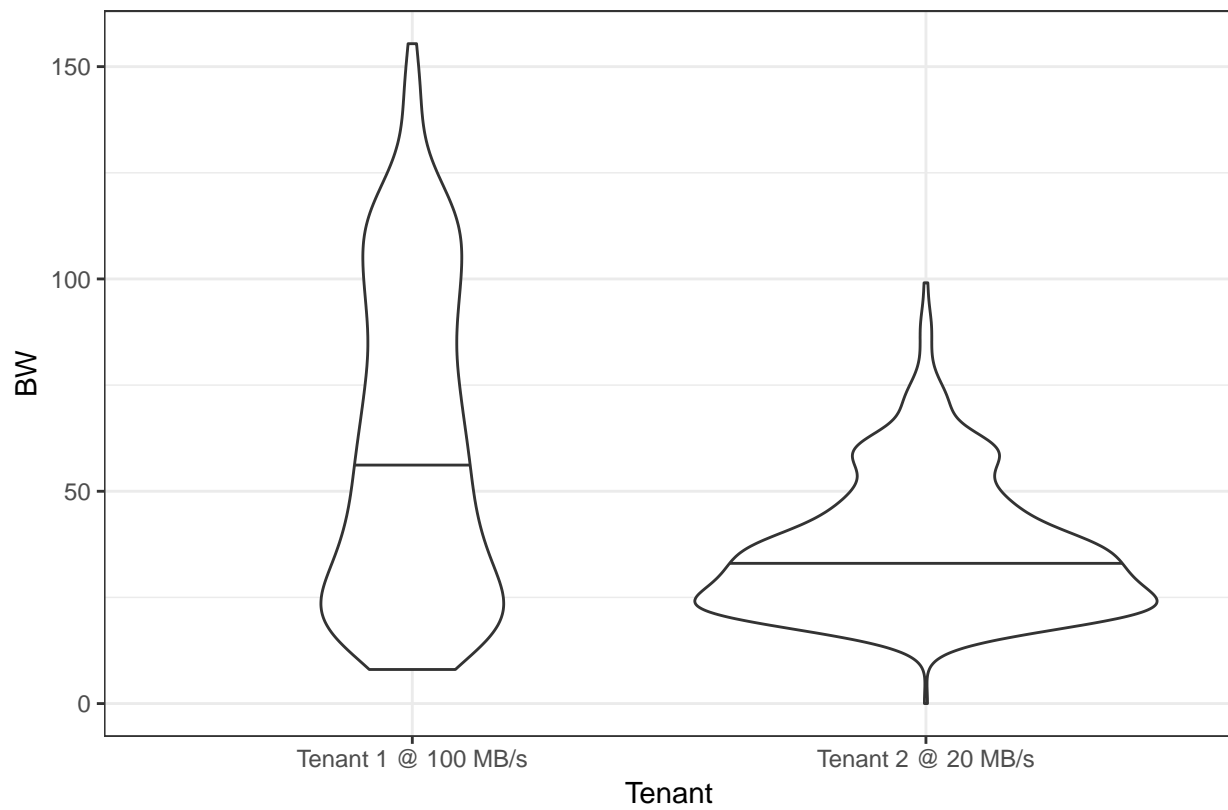


`draw2(dades)`



`draw3(dades)`

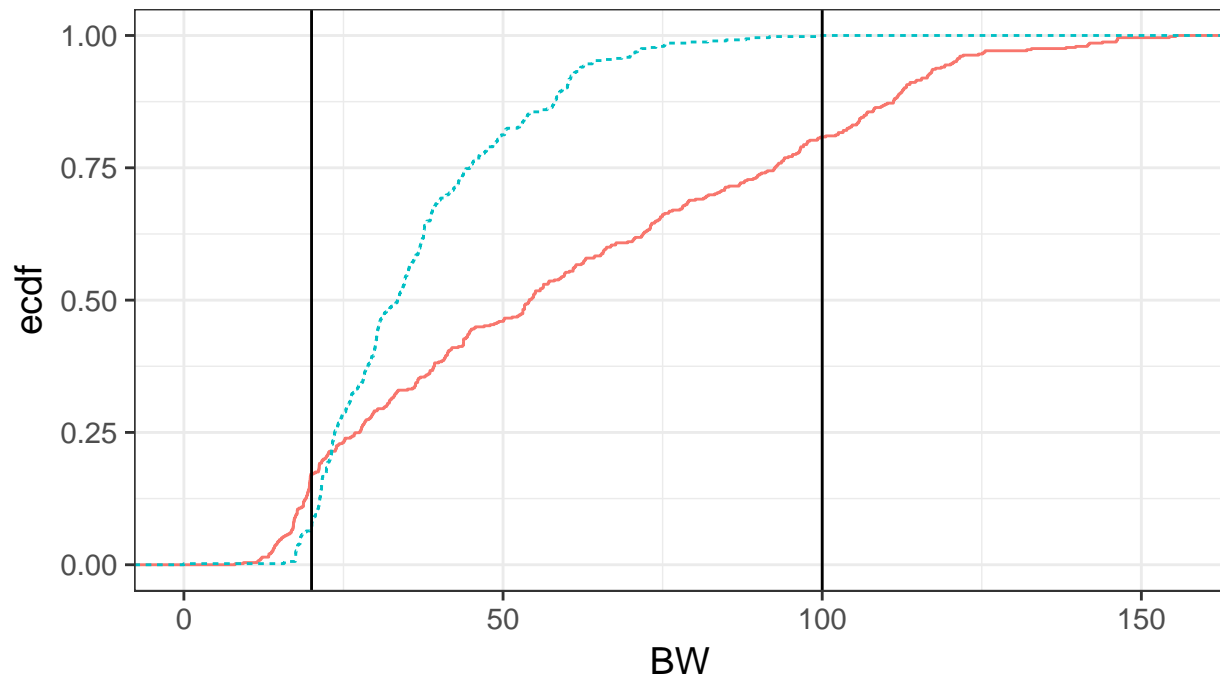
BSC 100 / 20 / Outside interference of 10 MB/s



`draw4(dades)`

BSC 100 / 20 / Outside interference of 10 MB/s

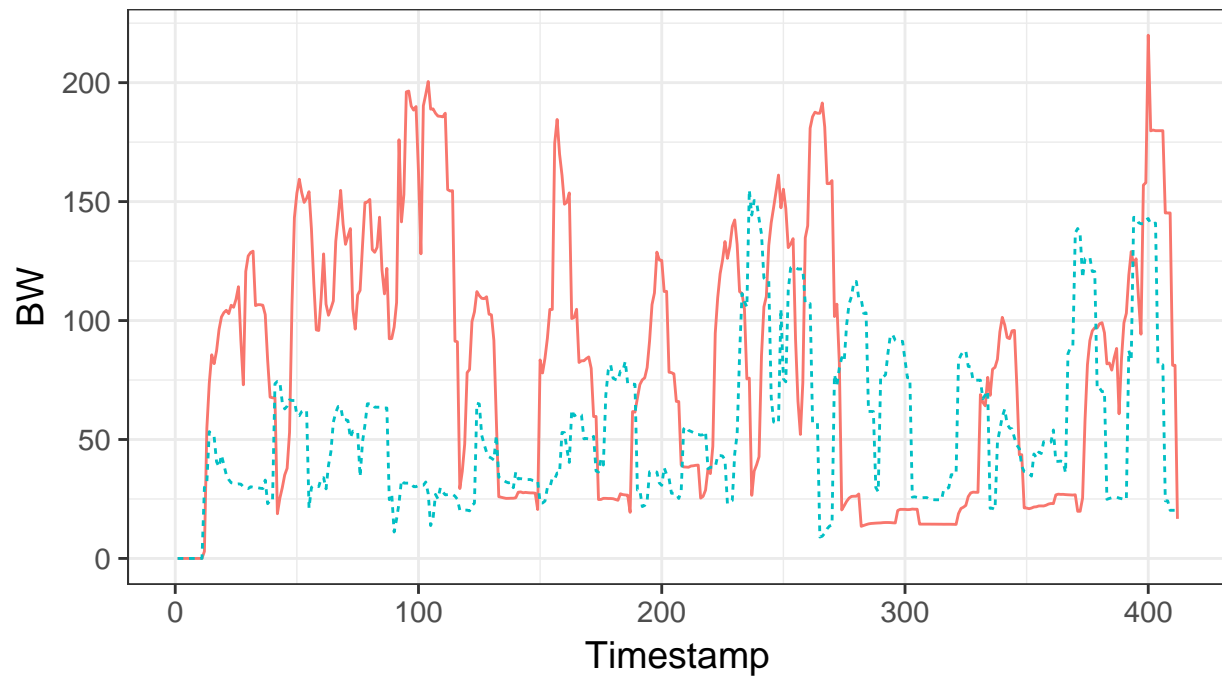
Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



```
dades <- loadData("../log31/log31.csv","BSC 100 / 20 / Outside interference of 10 MB/s",20,100)
draw1(dades)
```

BSC 100 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s



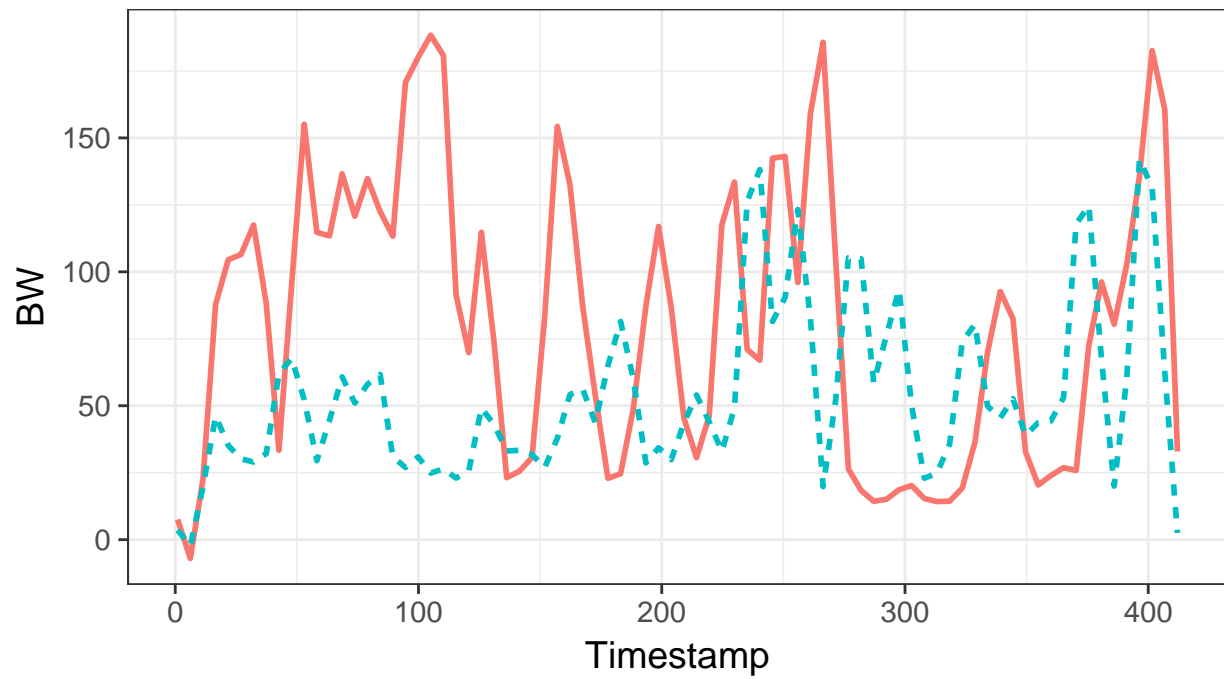
```
drawsmooth(dades)
```

```
## Warning: Ignoring unknown parameters: degree
```

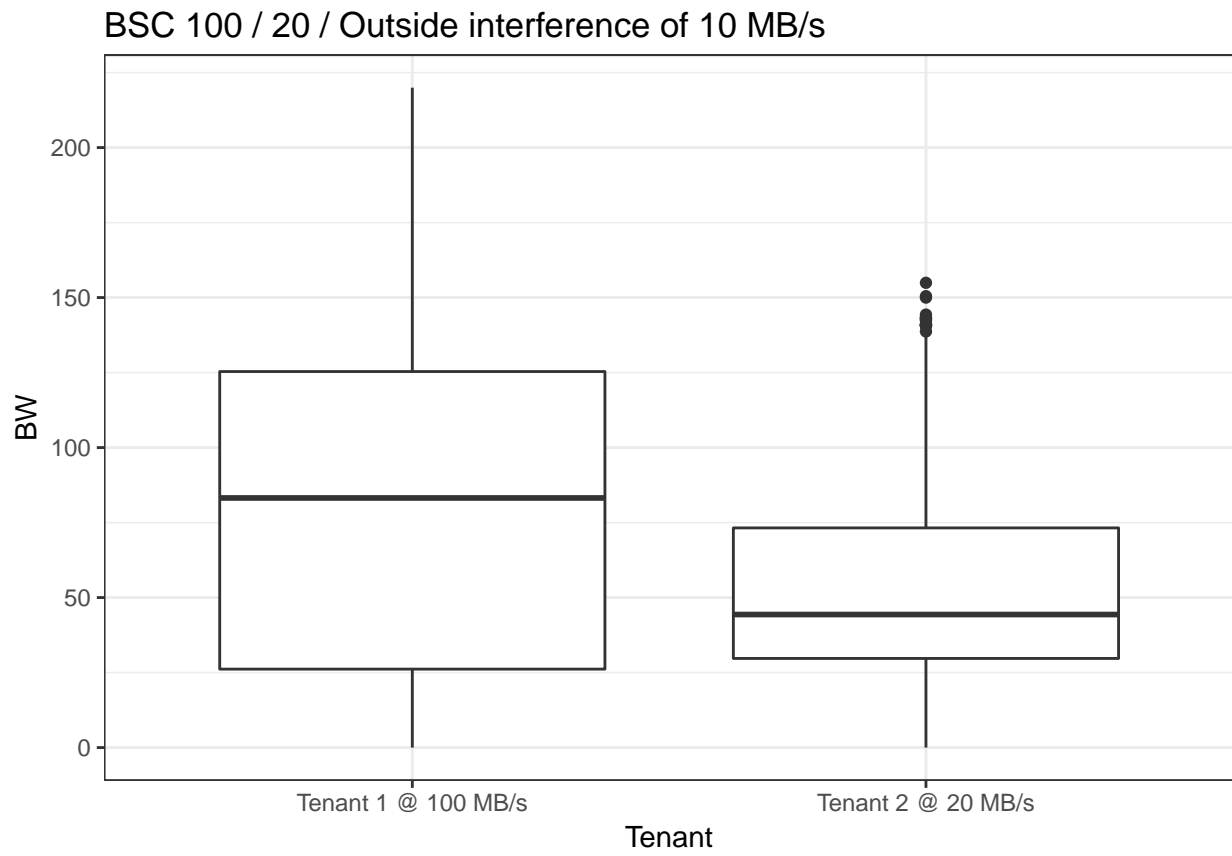
```
## `geom_smooth()` using method = 'loess'
```

BSC 100 / 20 / Outside interference of 10 MB/s

Tenant — Tenant 1 @ 100 MB/s - - - Tenant 2 @ 20 MB/s

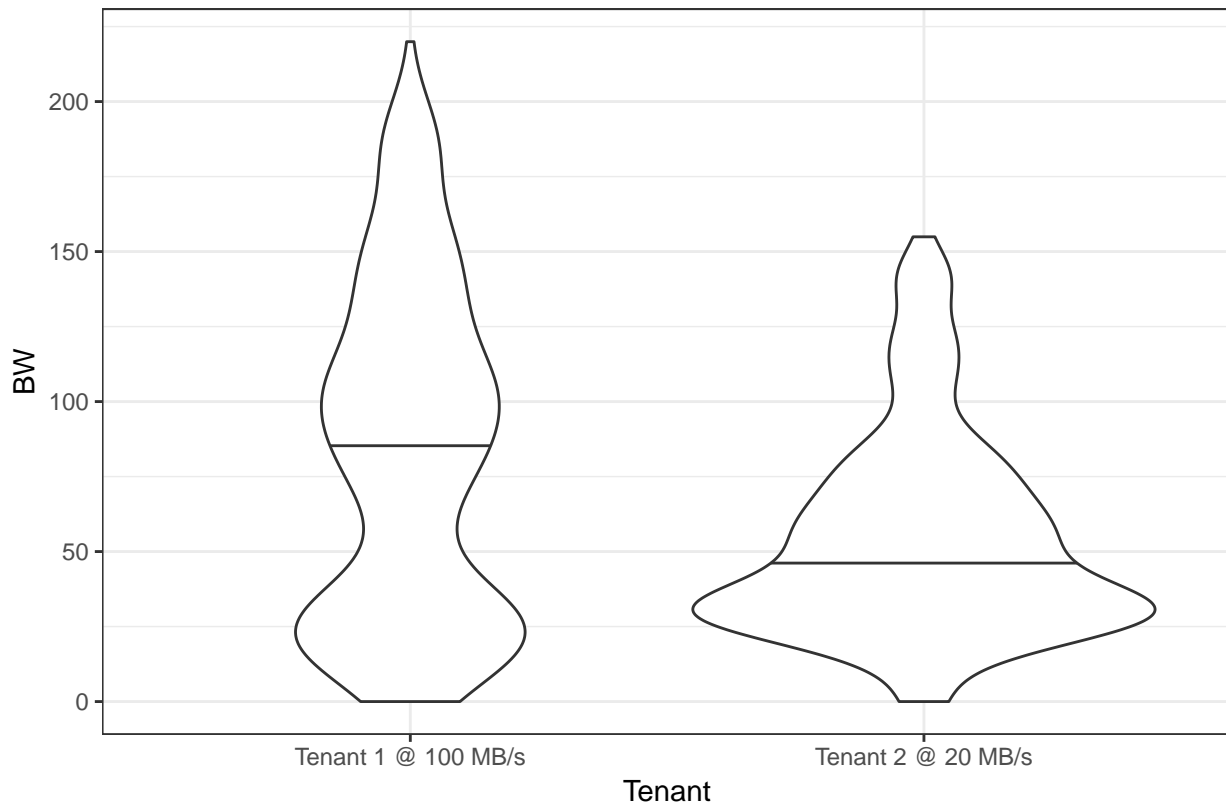


`draw2(dades)`



```
draw3(dades)
```

BSC 100 / 20 / Outside interference of 10 MB/s



`draw4(dades)`

BSC 100 / 20 / Outside interference of 10 MB/s

