R Notebook

```r
library(ggplot2)
library(reshape2)
library(doBy)
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)
```
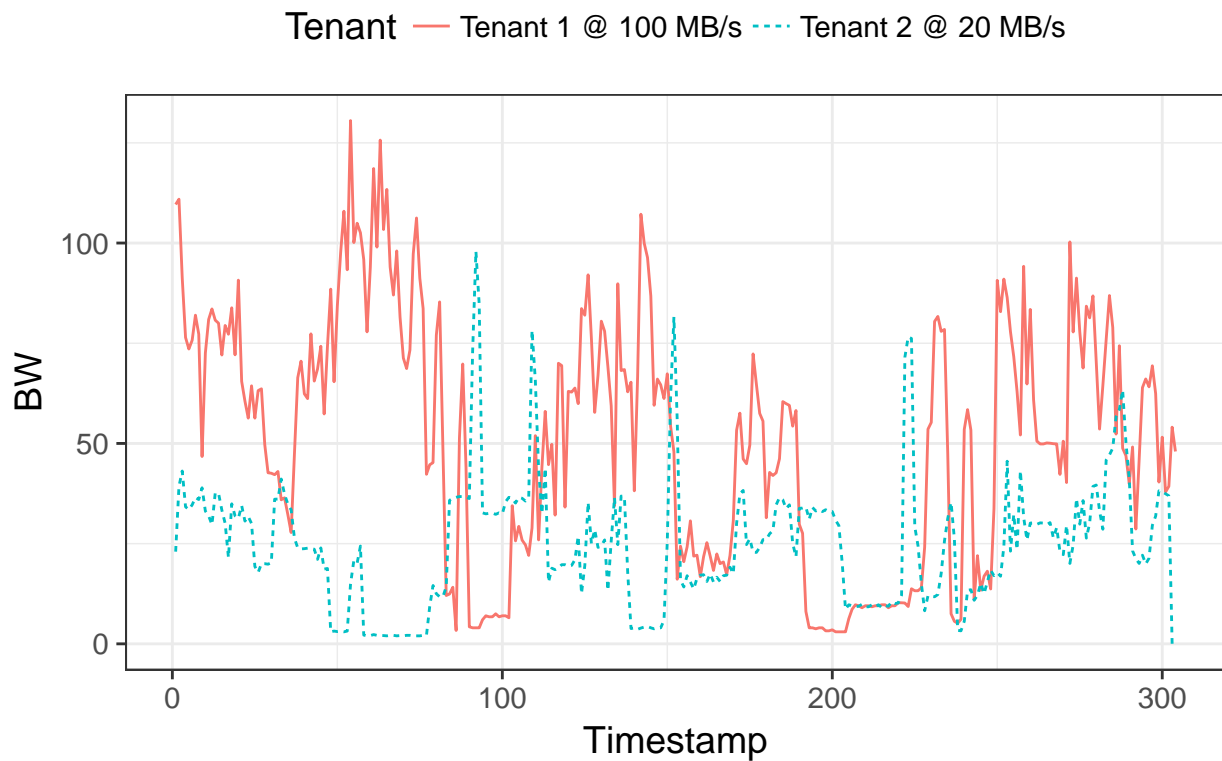
```
{
  ggplot(dades)+geom_violin(aes(x=Tenant,y=BW),draw_quantiles = c(0.5))+theme_bw()+labs(title=(dades$de
}

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

```
URV10020 <- loadData("../log41/log41.csv","URV 100 / 20", 20, 100)
draw1(URV10020)
```
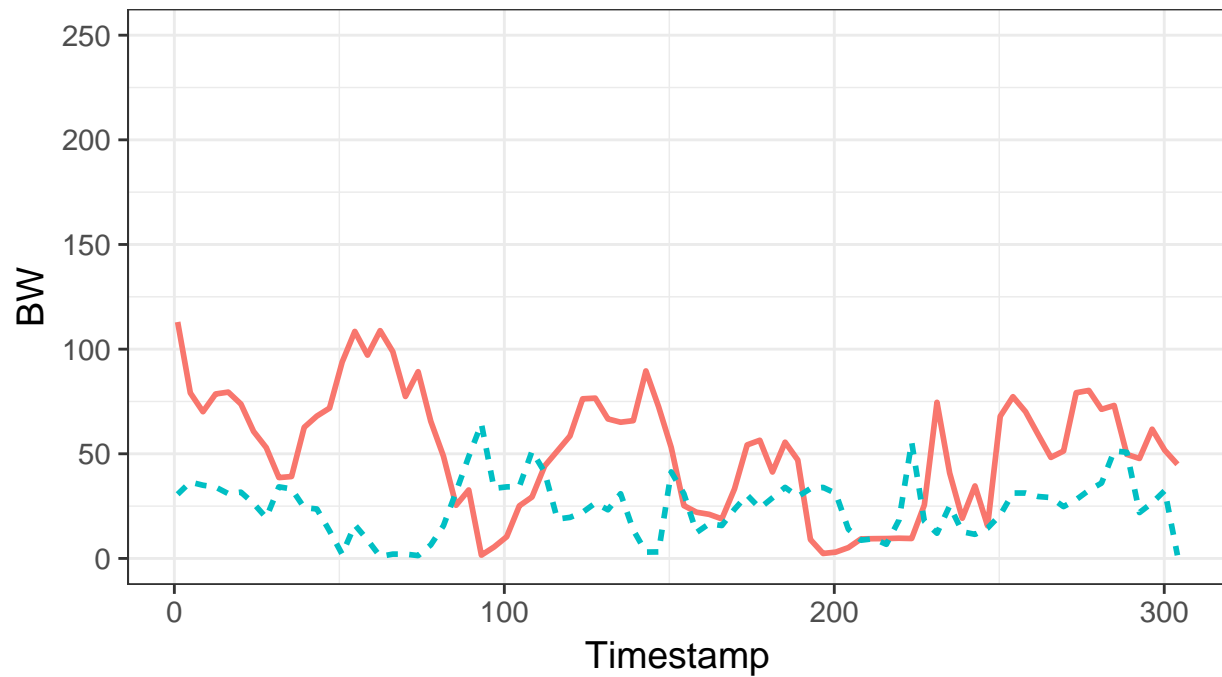
URV 100 / 20


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

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

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

URV 100 / 20


```
pdf(file="URV2-100_20_Timeline.pdf",width = 7, height= 5)
drawsmooth(URV10020)+scale_y_continuous(limits=c(0,250))
```

```
## Warning: Ignoring unknown parameters: degree
```
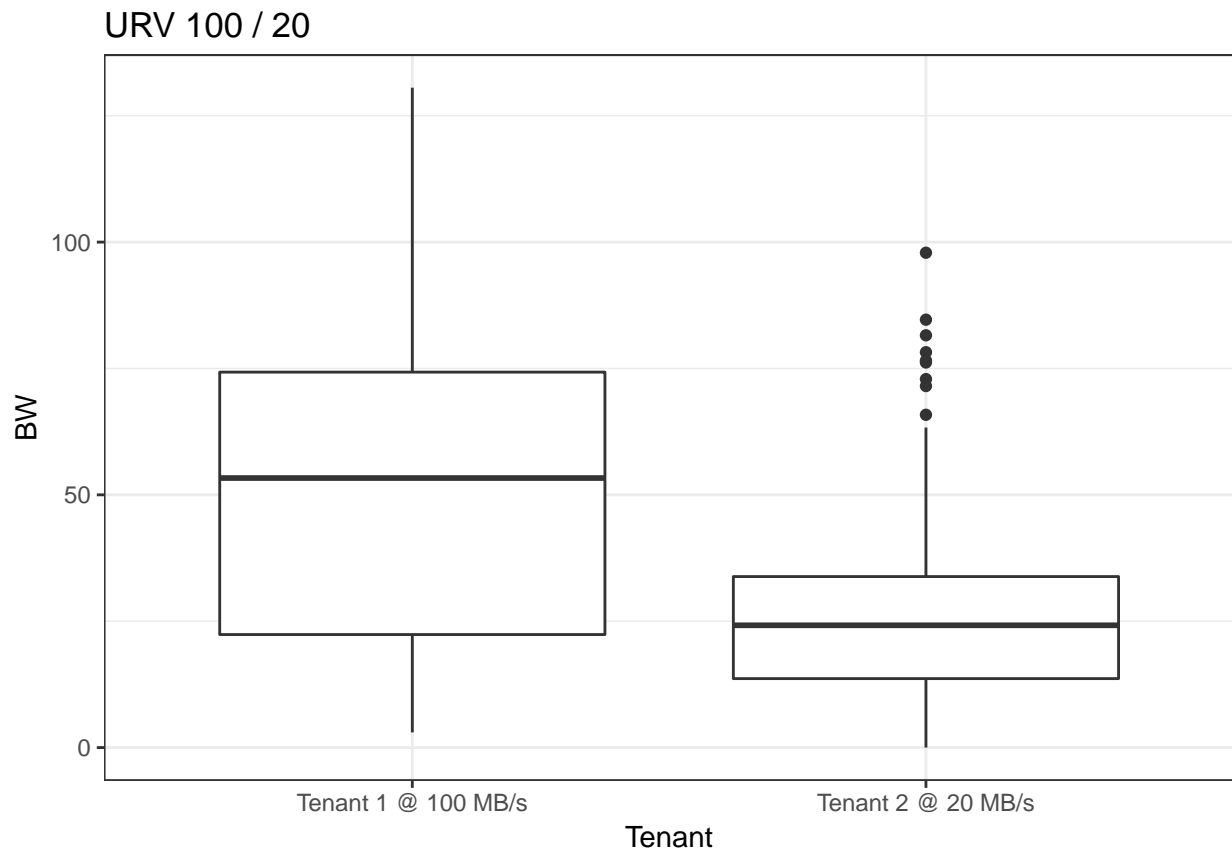
```
## `geom_smooth()` using method = 'loess'
```
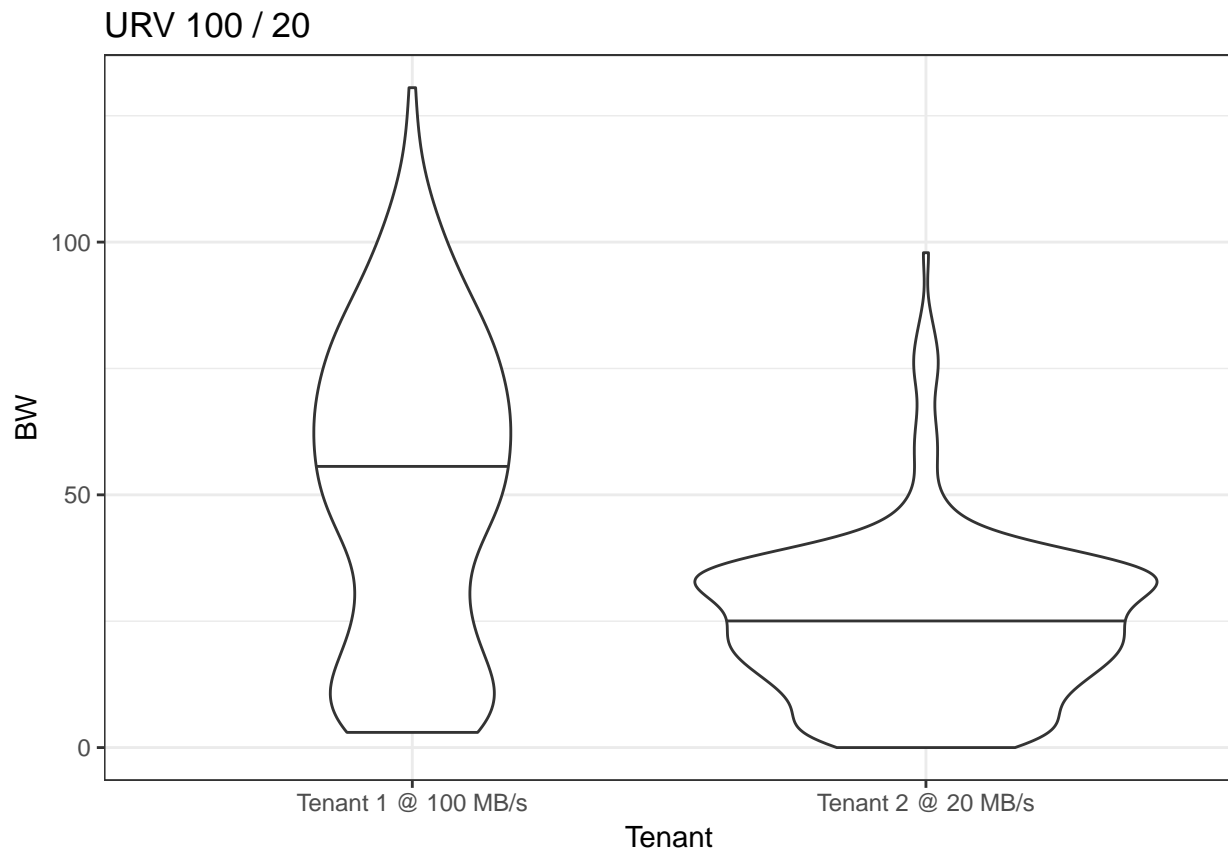
```
dev.off()
```
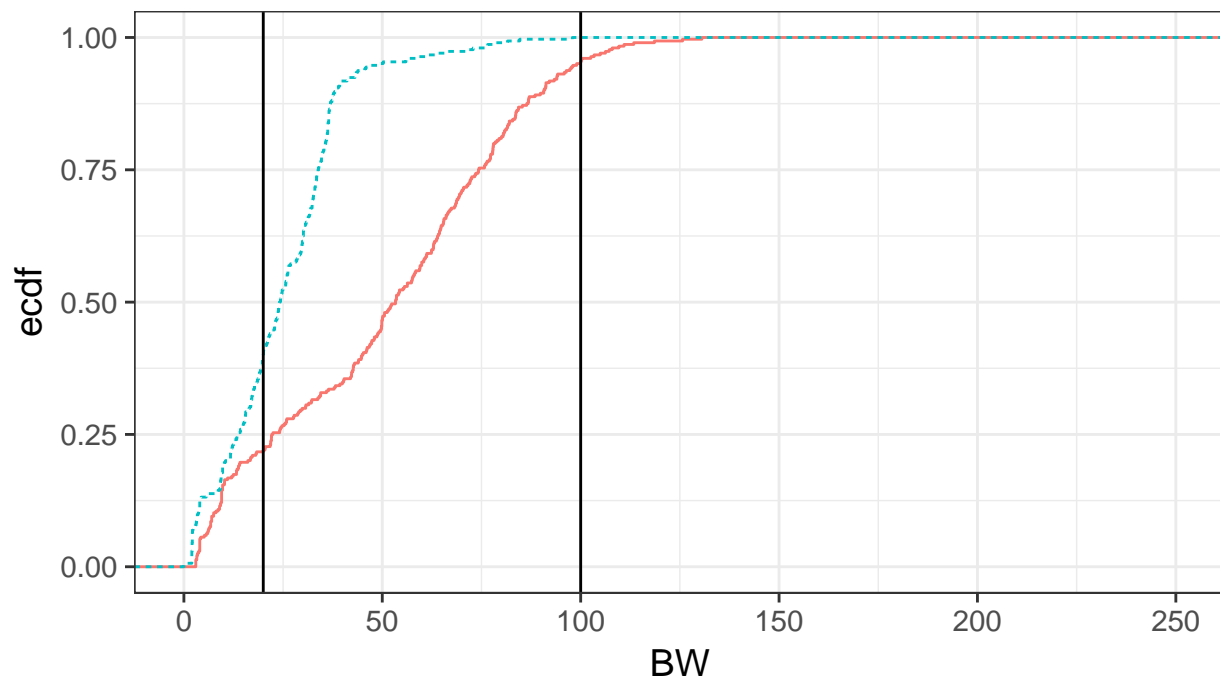
```
## pdf
##   2
```

```
draw2(URV10020)
```

URV 100 / 20


```
draw3(URV10020)
```

URV 100 / 20

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

URV 100 / 20


```r
pdf(file="URV2-100_20_ECDF.pdf",width = 7, height= 5)
draw4(URV10020)+scale_x_continuous(limits=c(0,250))
dev.off()
```

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

```r
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      3  22.35938  53.3252  74.28125 130.55078       100
## 2  Tenant 2 @ 20 MB/s      0  13.64062  24.1875  33.82812  97.90039       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
```

```r
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
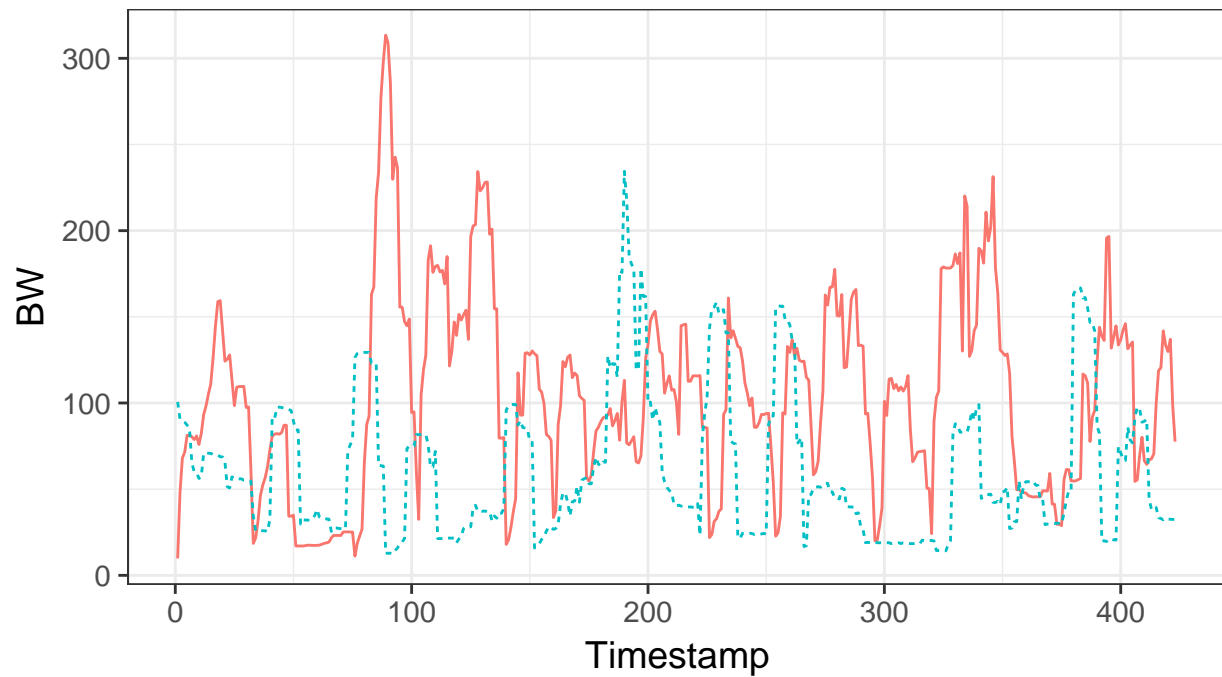

```
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```
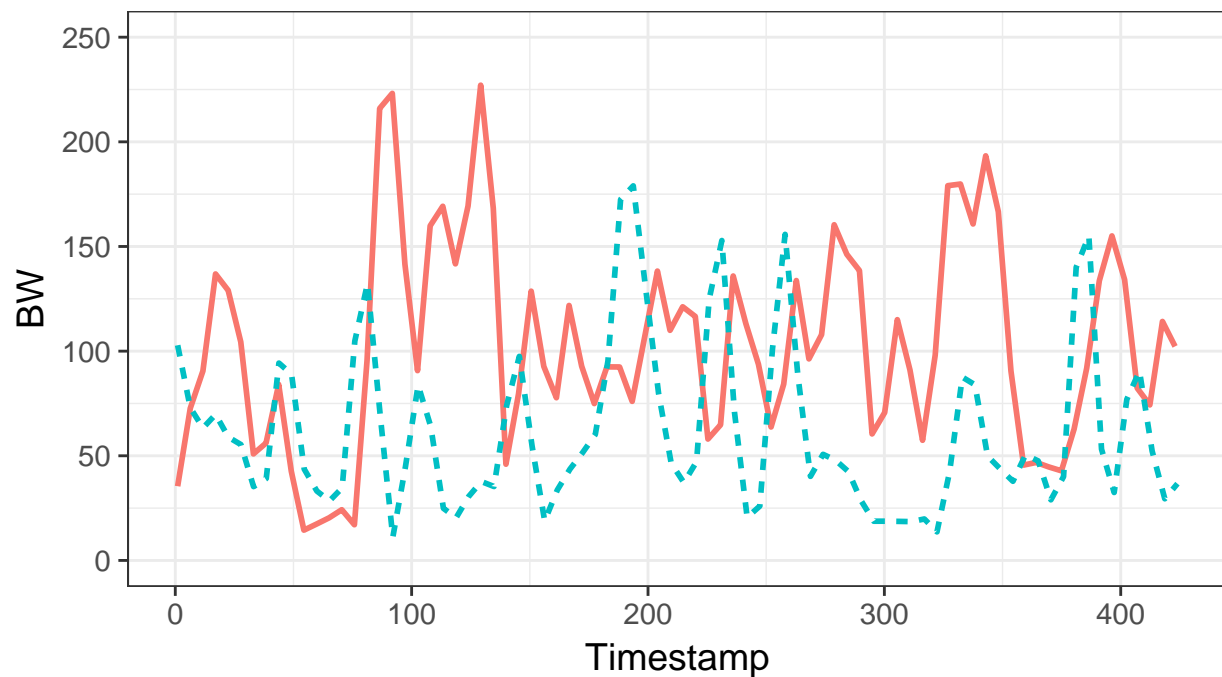
```
## Warning: Ignoring unknown parameters: degree
```

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

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```
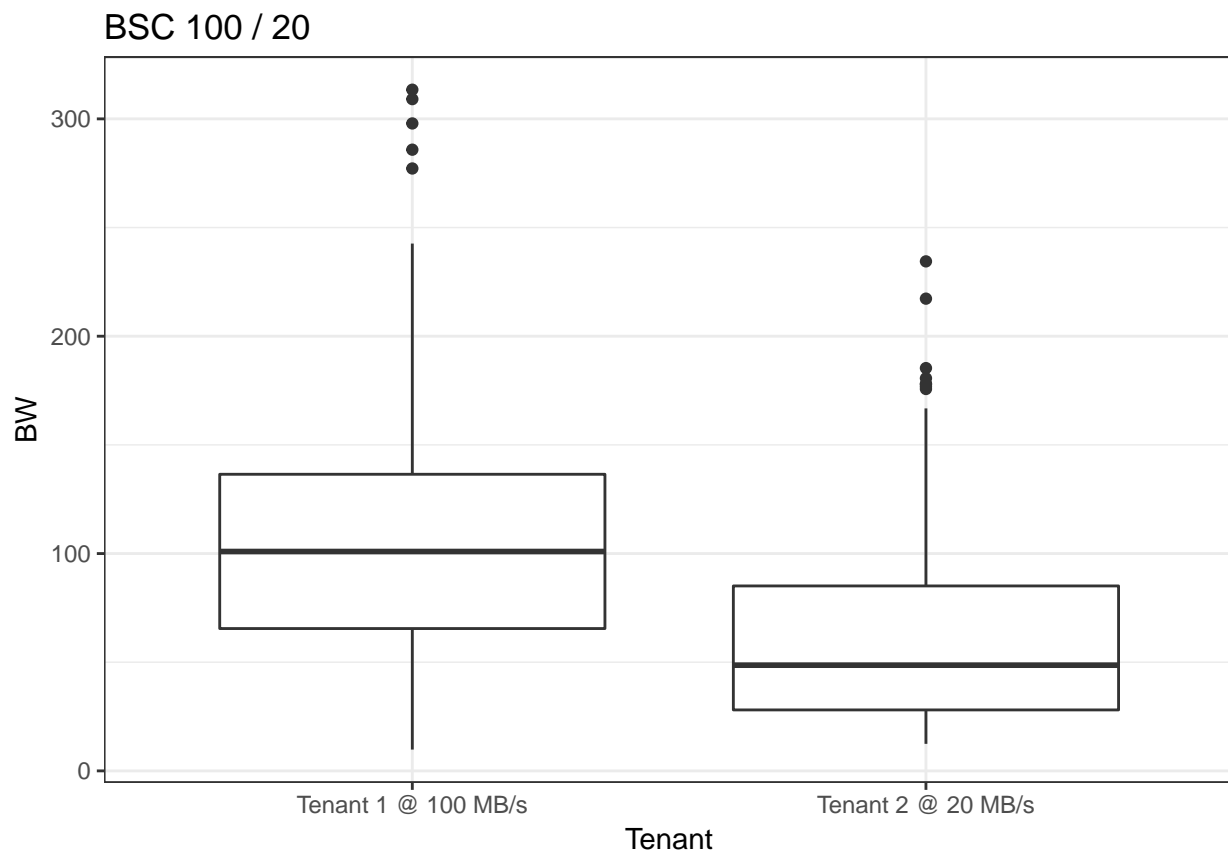
BSC 100 / 20

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).
```
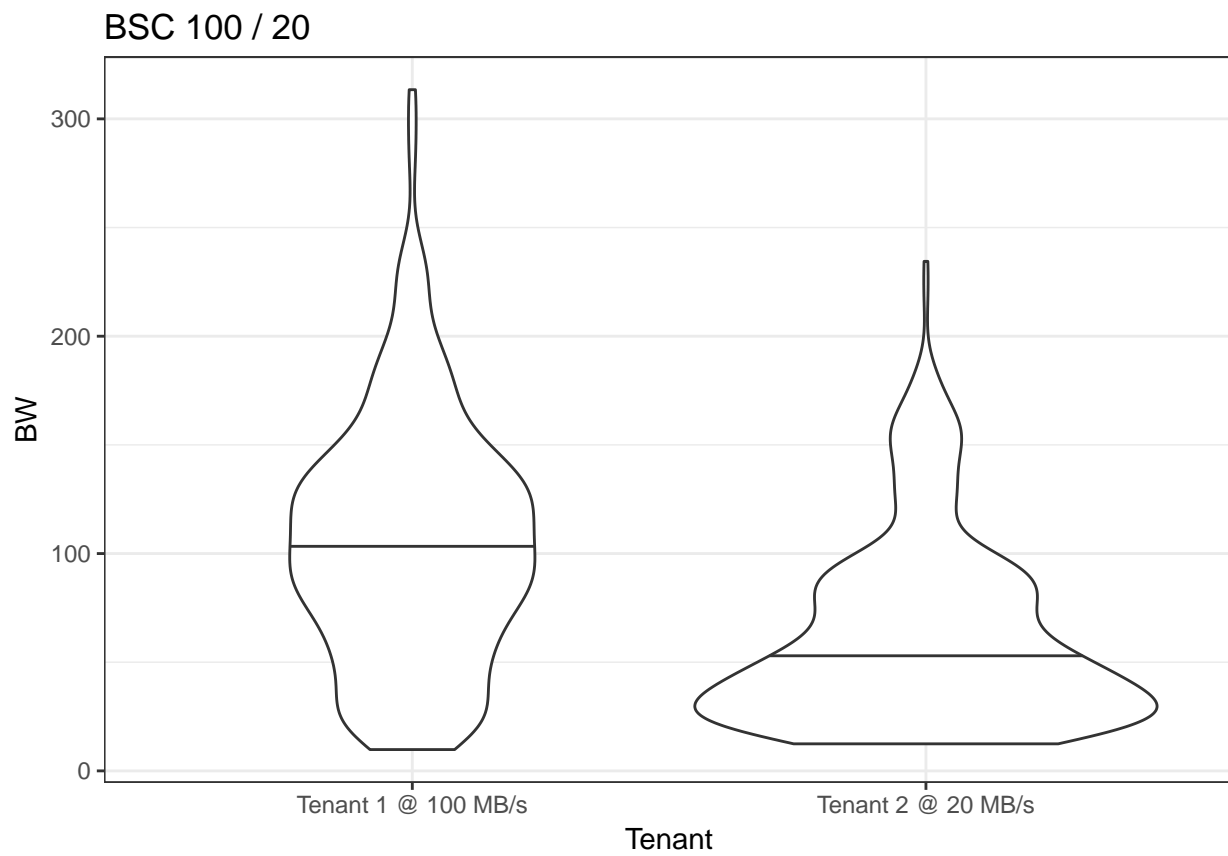
```
dev.off()
```

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

```
draw2(dades)
```

```
## Warning: Removed 1 rows containing non-finite values (stat_boxplot).
```
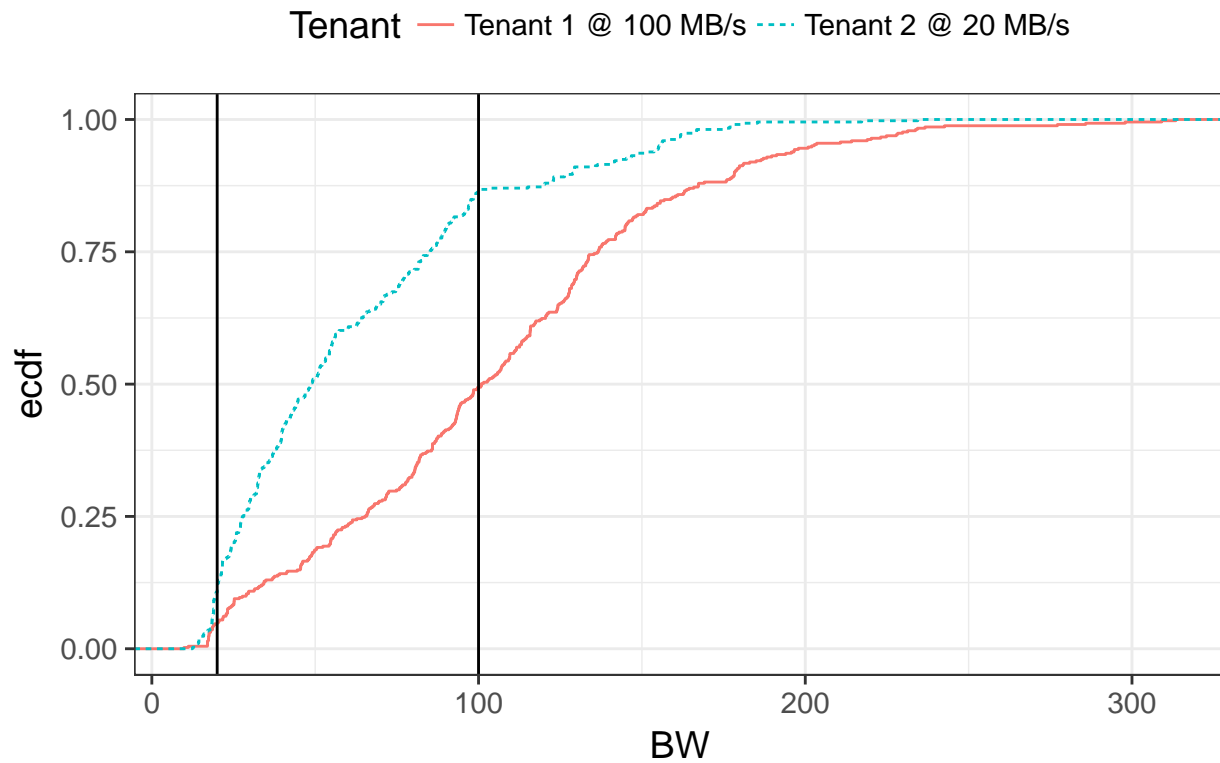
BSC 100 / 20

```
draw3(dades)
```

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

BSC 100 / 20


```
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))
```

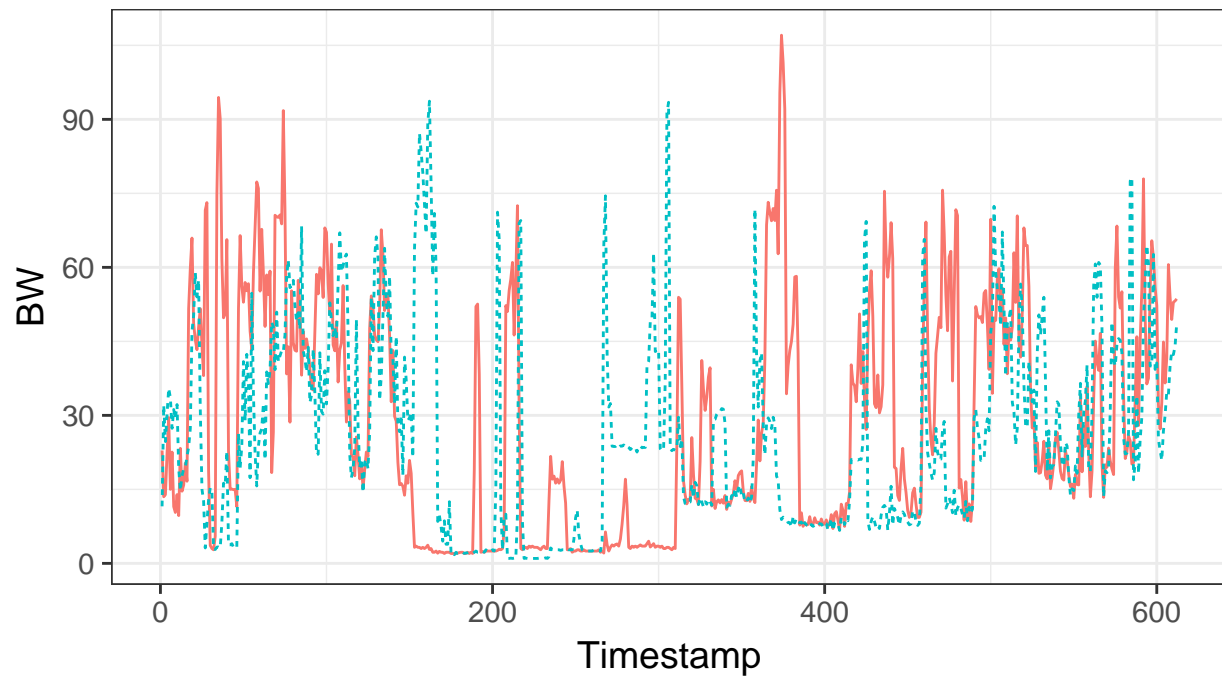## Warning: Removed 6 rows containing non-finite values (stat_ecdf).

```
dev.off()
```

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

```
dades <- loadData("../log44/log44.csv","URV 50 / 20",20,50)
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))
```
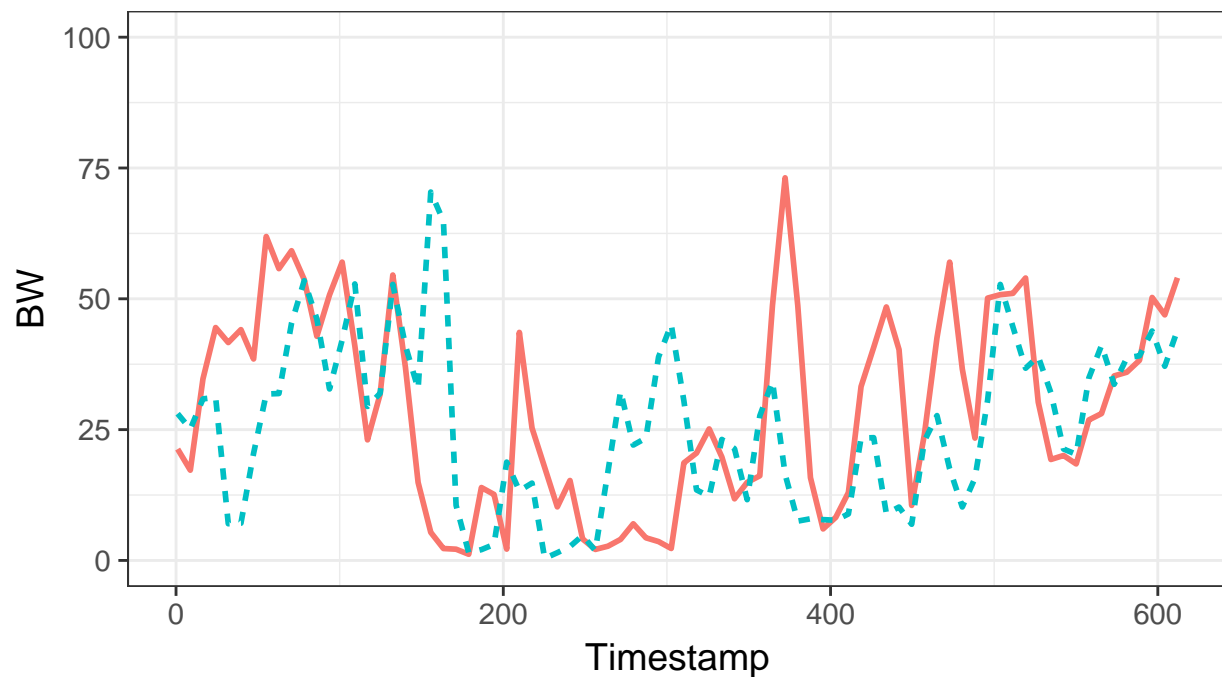
Warning: Ignoring unknown parameters: degree

`geom_smooth()` using method = 'loess'

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

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

URV 50 / 20

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


```
pdf(file="URV2-50_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).
```
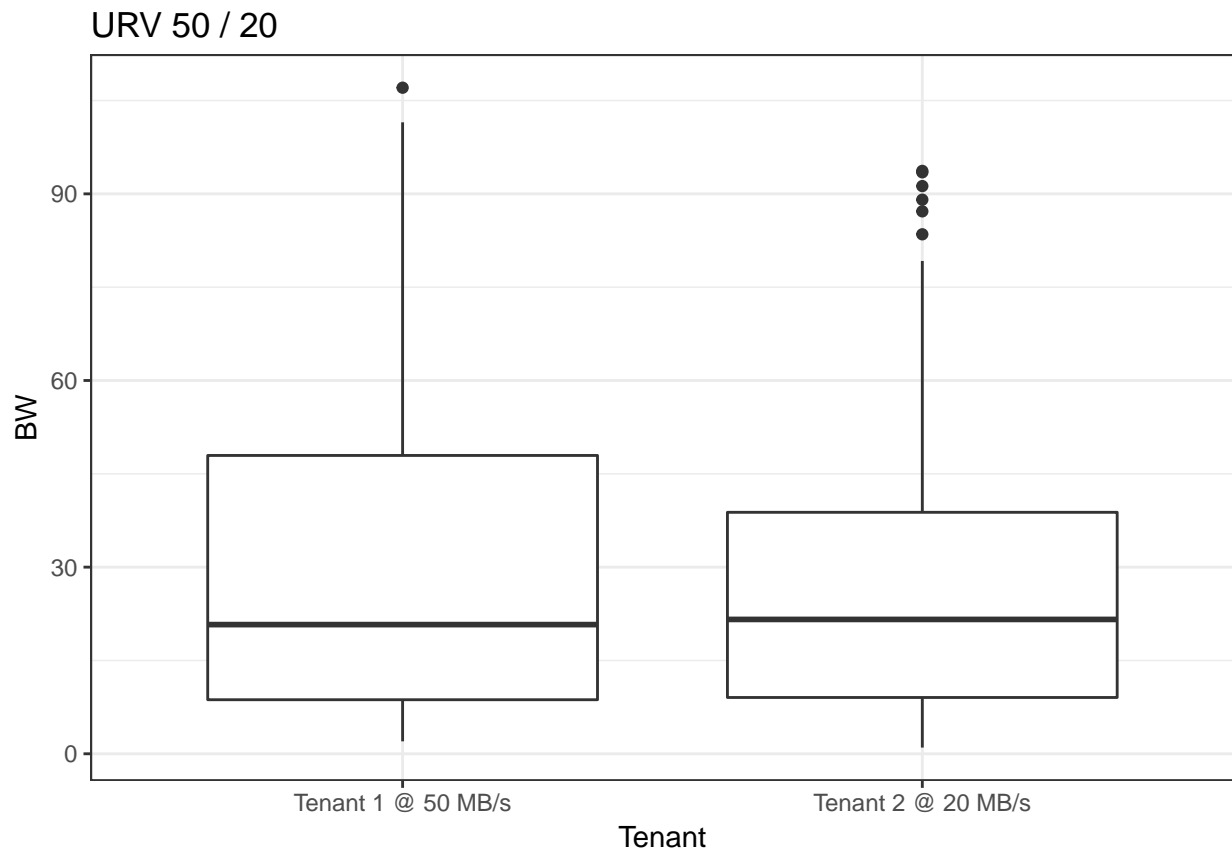
```
## Warning: Removed 1 rows containing missing values (geom_smooth).
```
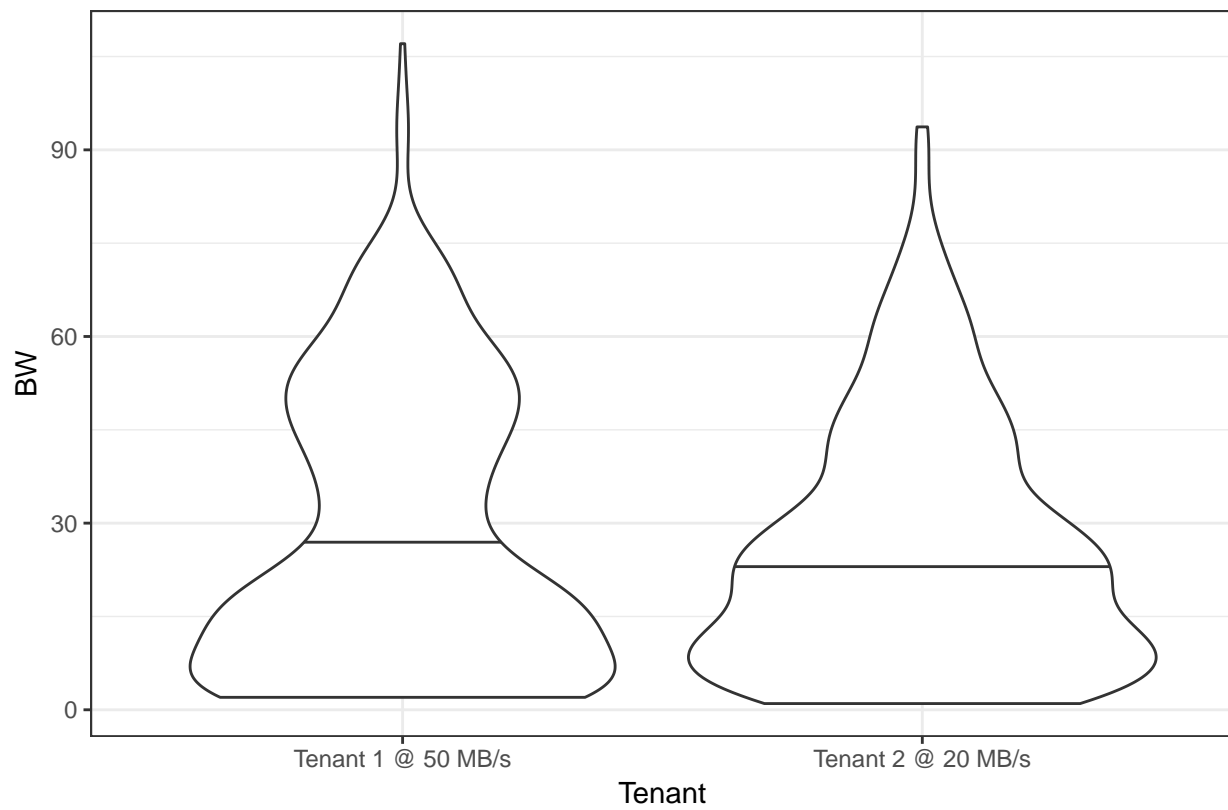
```
dev.off()
```

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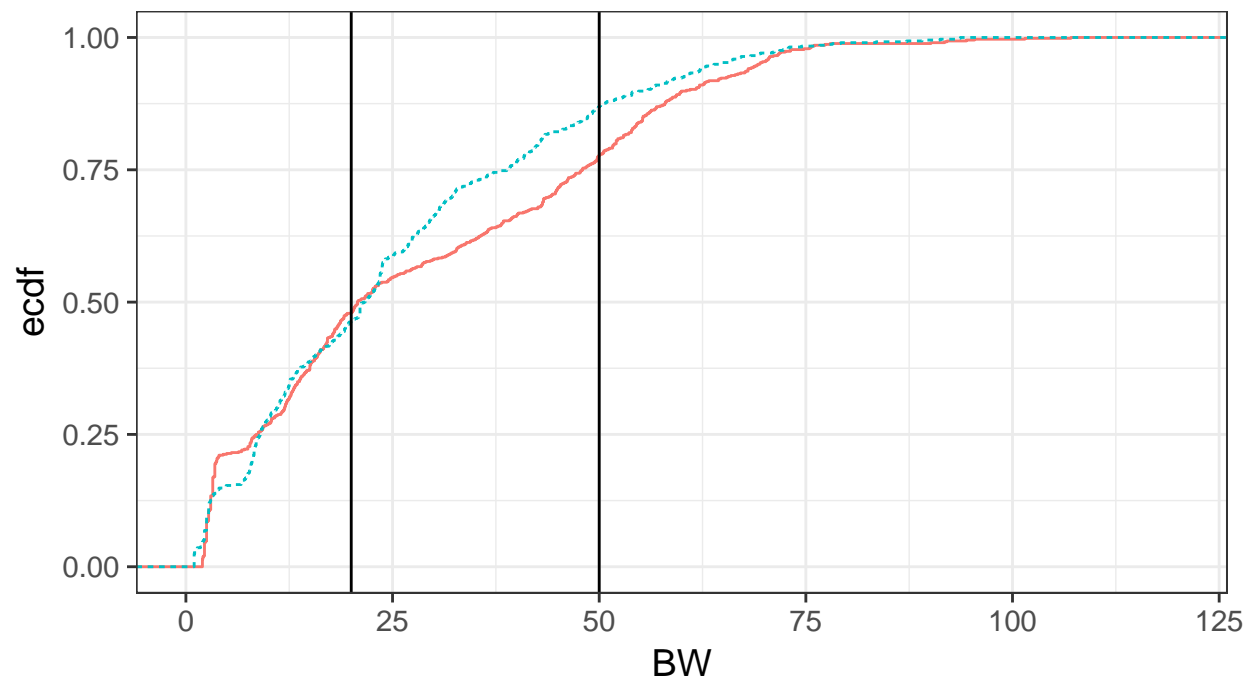
```
draw2(dades)
```

```
draw3(dades)
```

URV 50 / 20


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

URV 50 / 20


```
pdf(file="URV2-50_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     3 22.35938  53.3252  74.28125 130.55078       100
## 2  Tenant 2 @ 20 MB/s     0 13.64062 24.1875  33.82812  97.90039       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)
```
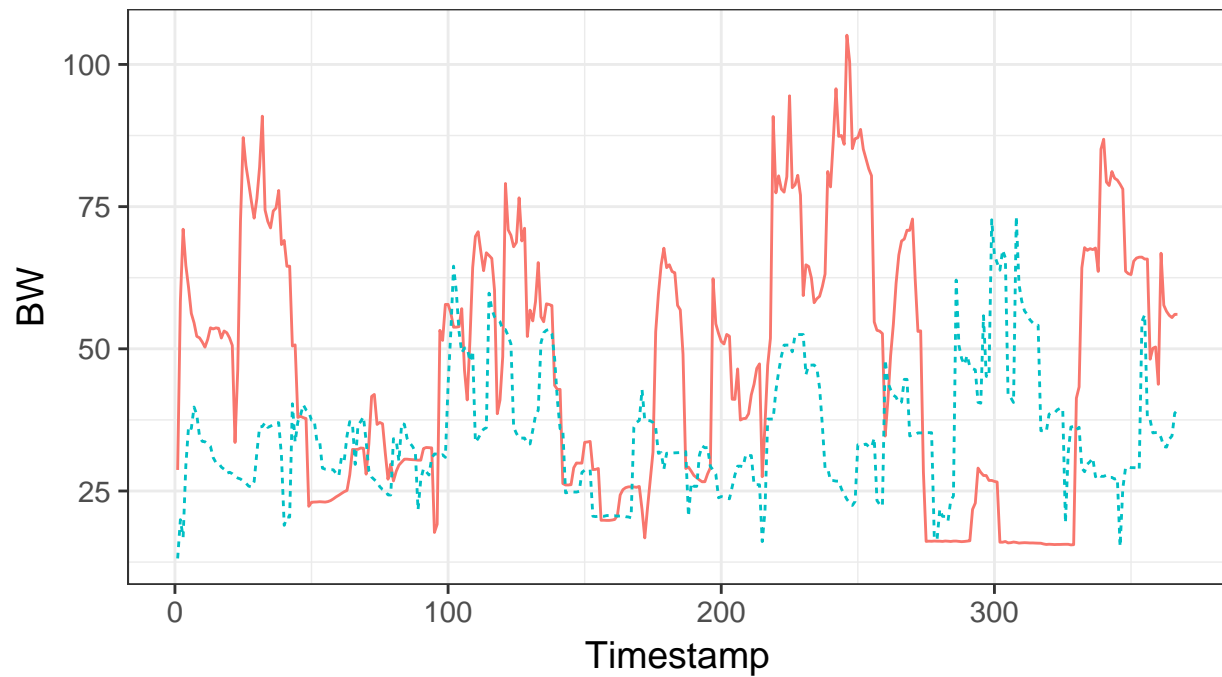
BSC 50 / 20

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


```
drawsmooth(dades)+scale_y_continuous(limits=c(0,100))
```
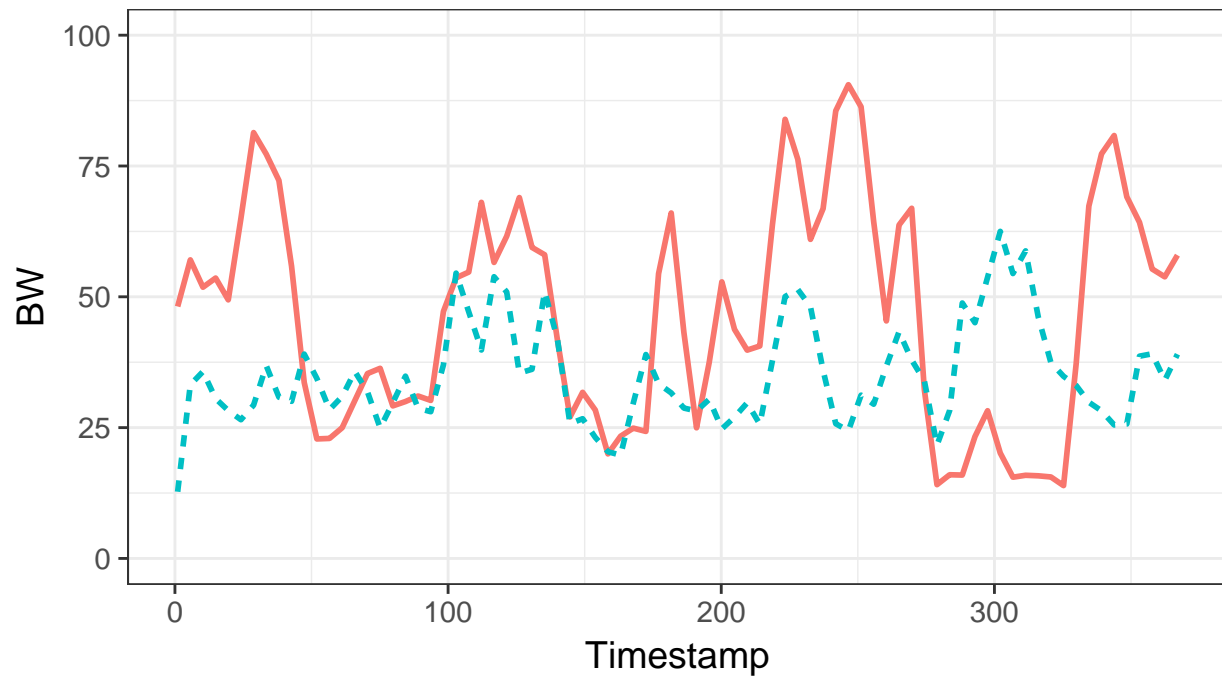
Warning: Ignoring unknown parameters: degree

`geom_smooth()` using method = 'loess'

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

BSC 50 / 20


```r
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'
```
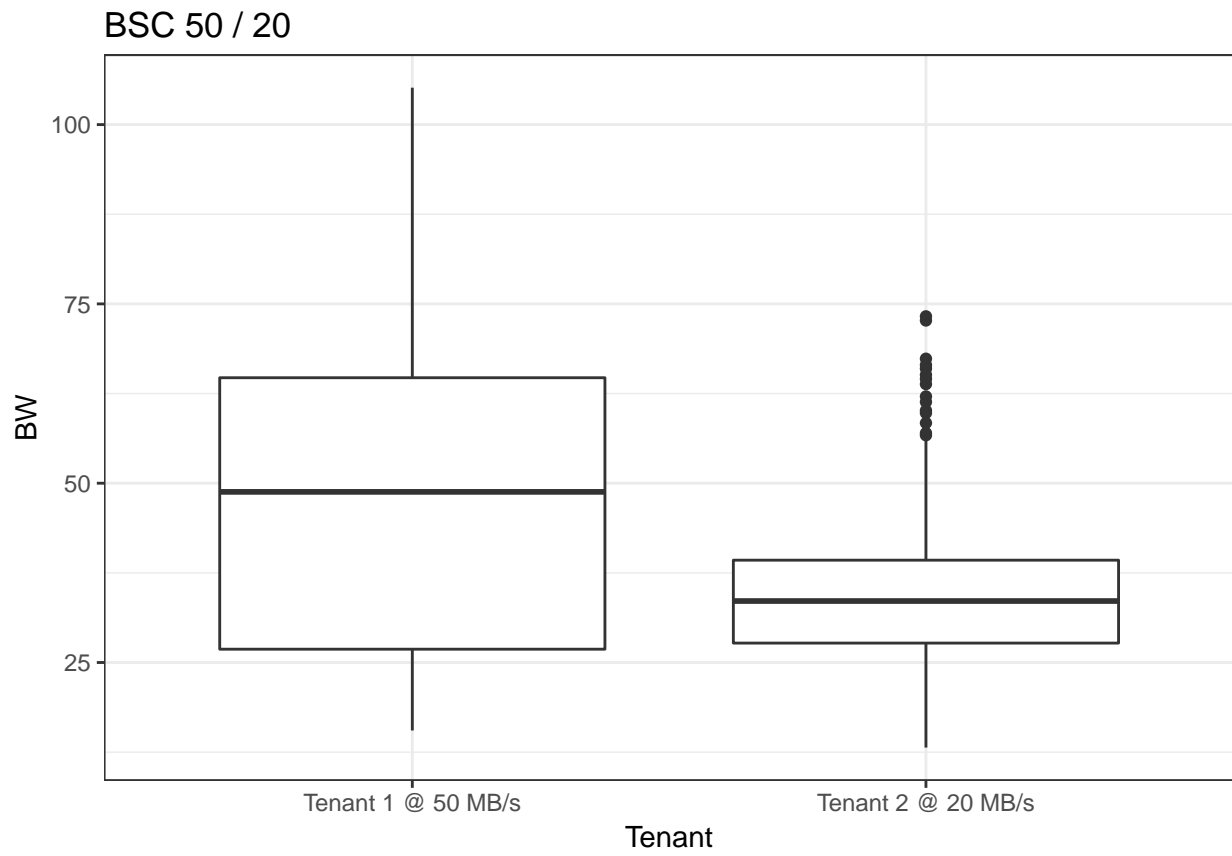
```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```
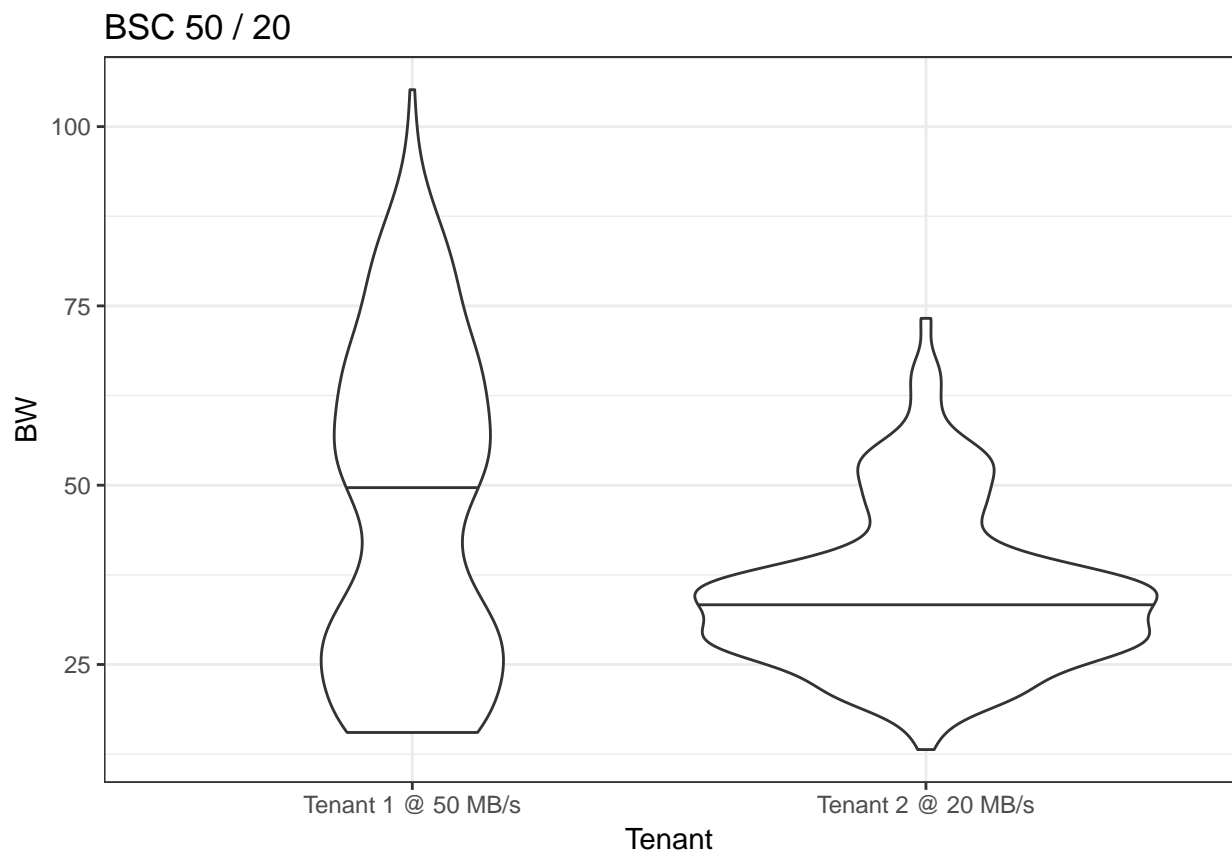
```r
dev.off()
```
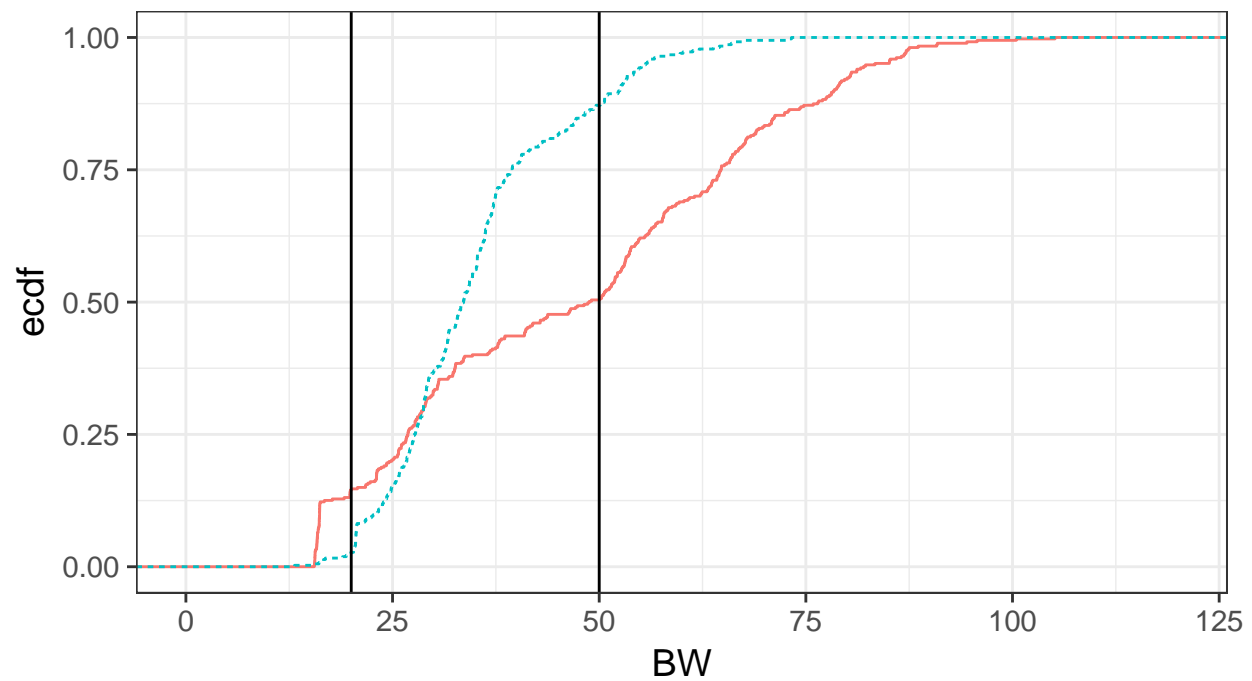
```
## pdf
##   2
```

```r
draw2(dades)
```

BSC 50 / 20

```
draw3(dades)
```

BSC 50 / 20

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

BSC 50 / 20

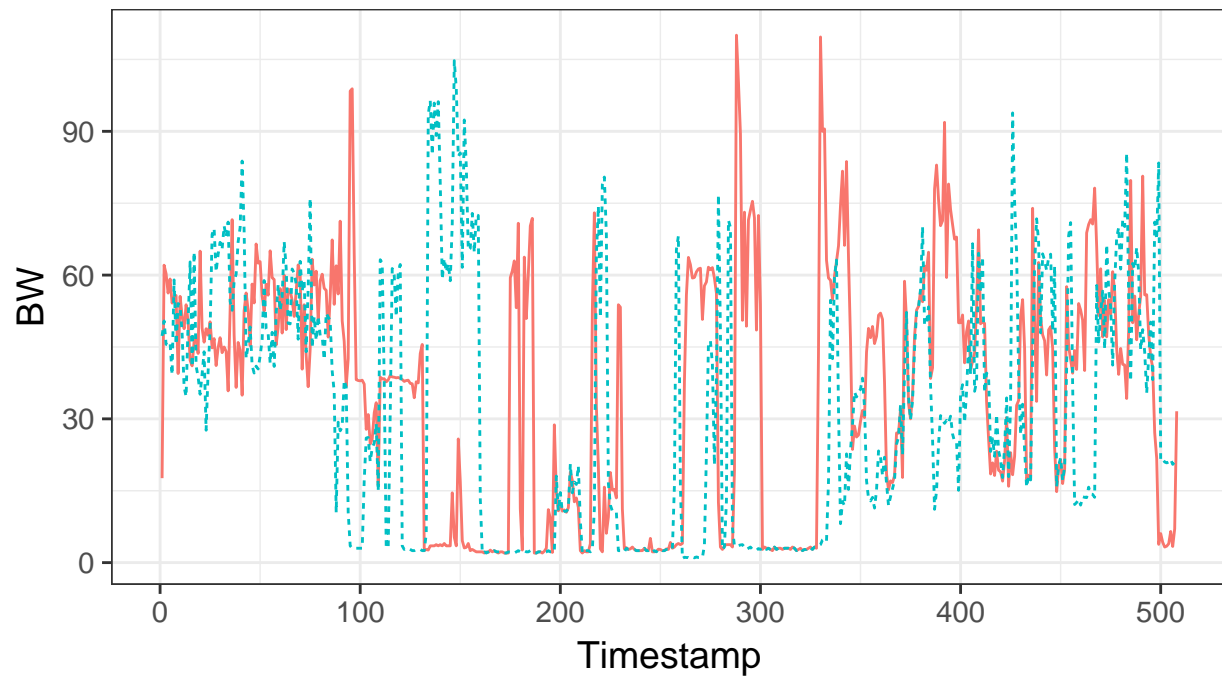Tenant   — Tenant 1 @ 50 MB/s   ···· Tenant 2 @ 20 MB/s


```
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("../log43/log43.csv","URV 100 / 100",100,100)
draw1(dades)
```

URV 100 / 100

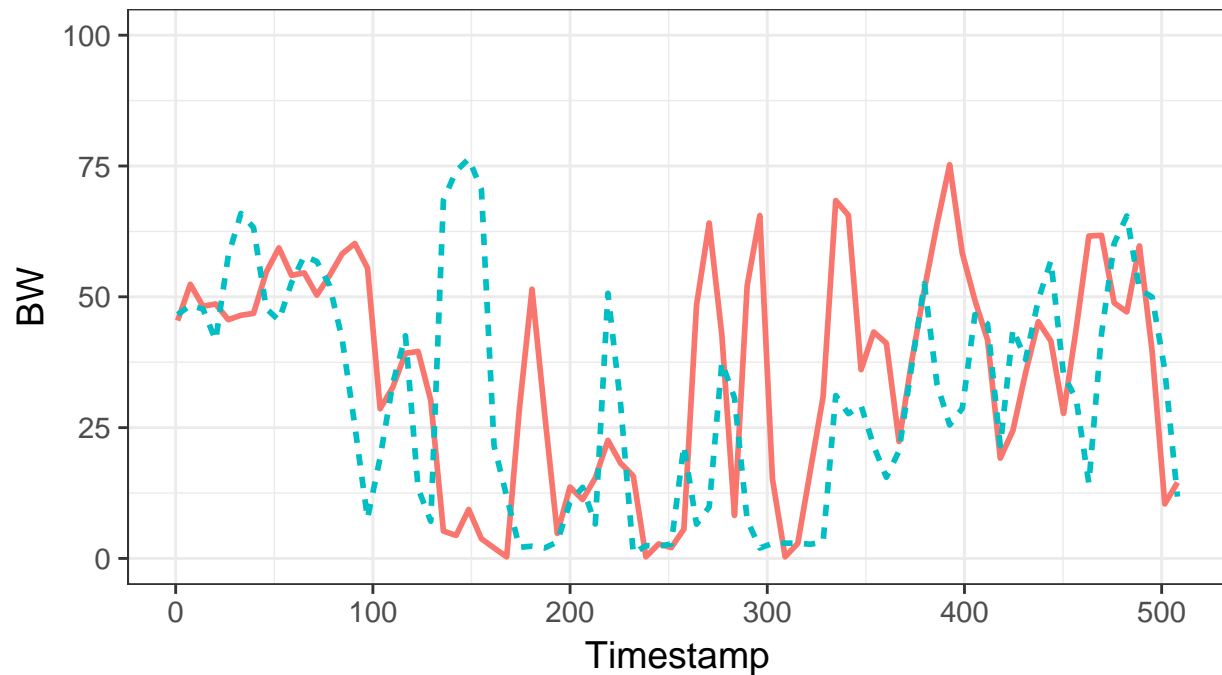Tenant ── Tenant 1 @ 100 MB/s ┈┈ Tenant 2 @ 100 MB/s


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

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

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

```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```
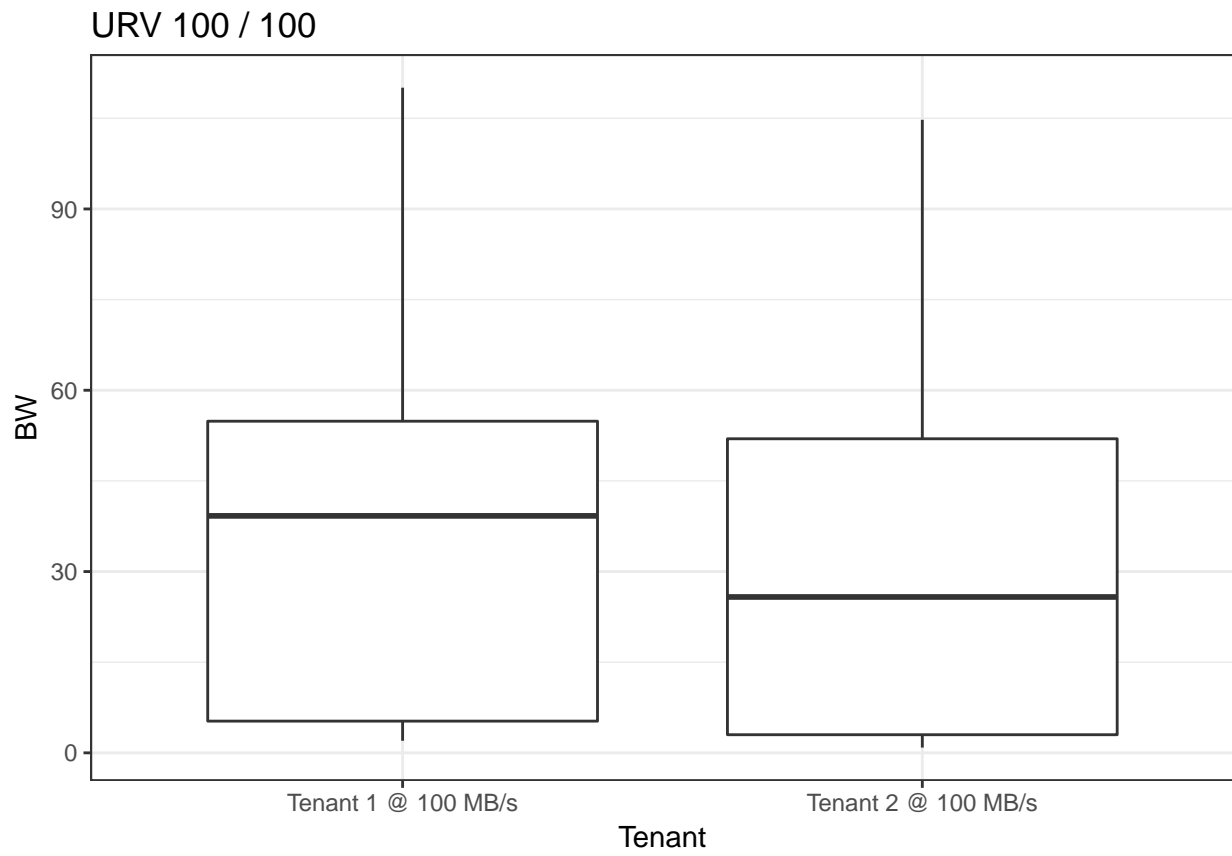
```
## Warning: Removed 2 rows containing missing values (geom_smooth).
```

URV 100 / 100

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


```
pdf(file="URV2-100_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 4 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 2 rows containing missing values (geom_smooth).
```
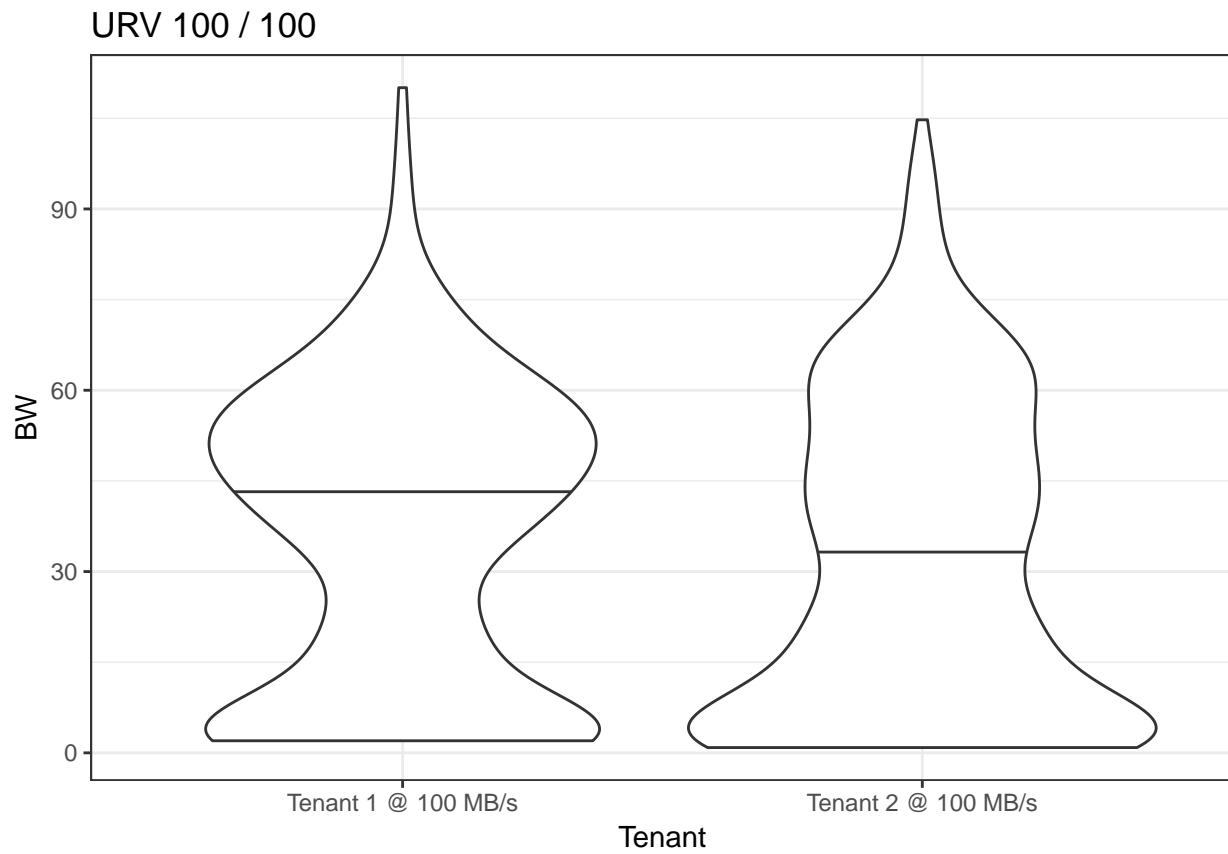
```
dev.off()
```

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

```
draw2(dades)
```

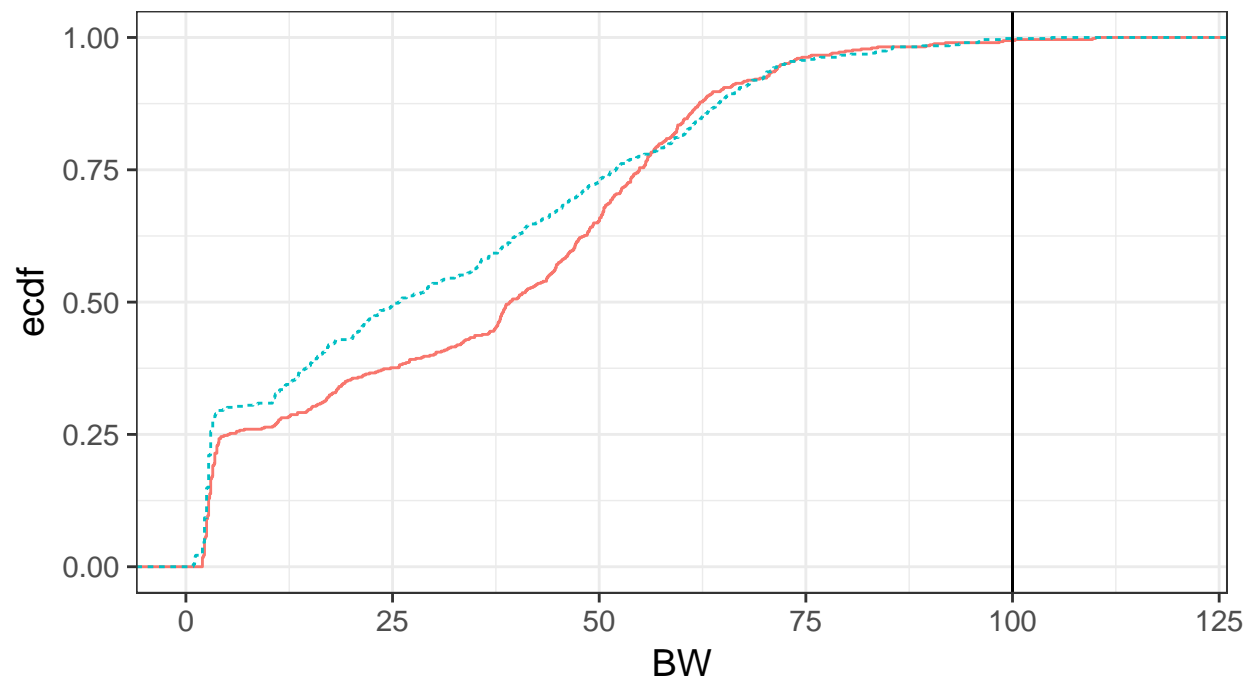## URV 100 / 100


```
draw3(dades)
```

URV 100 / 100

BW

90

60

30

0

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

Tenant

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

URV 100 / 100

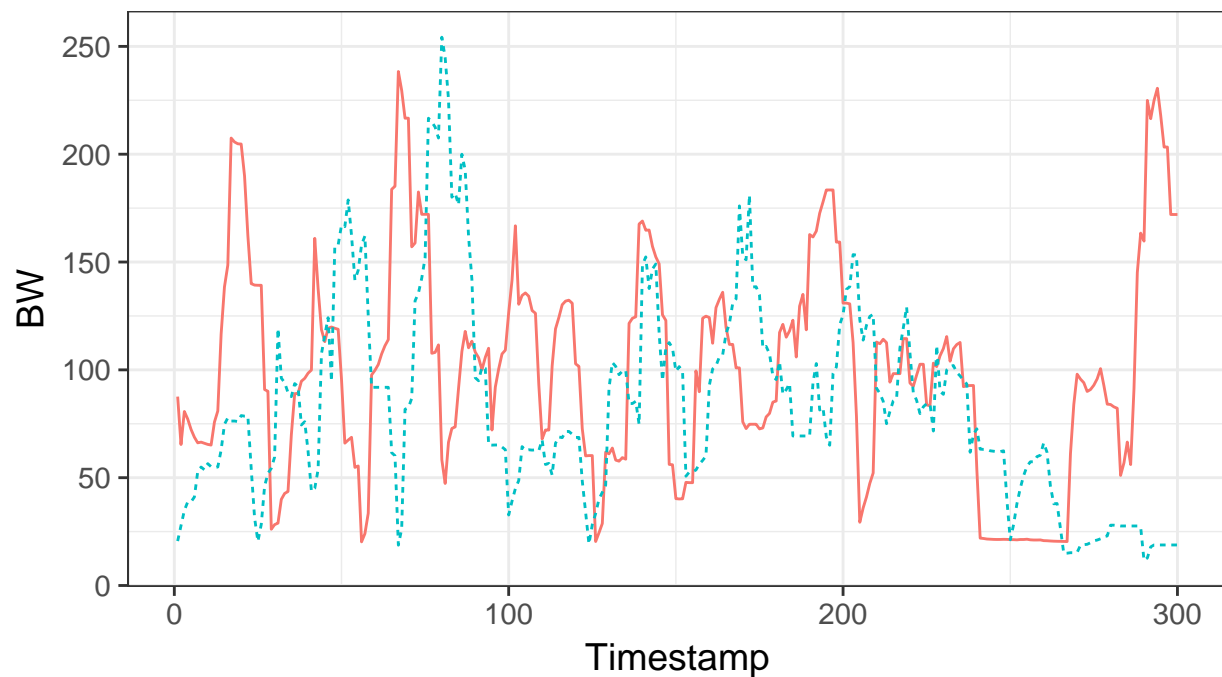Tenant ⎯⎯ Tenant 1 @ 100 MB/s ⋯⋯ Tenant 2 @ 100 MB/s


```
pdf(file="URV2-100_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
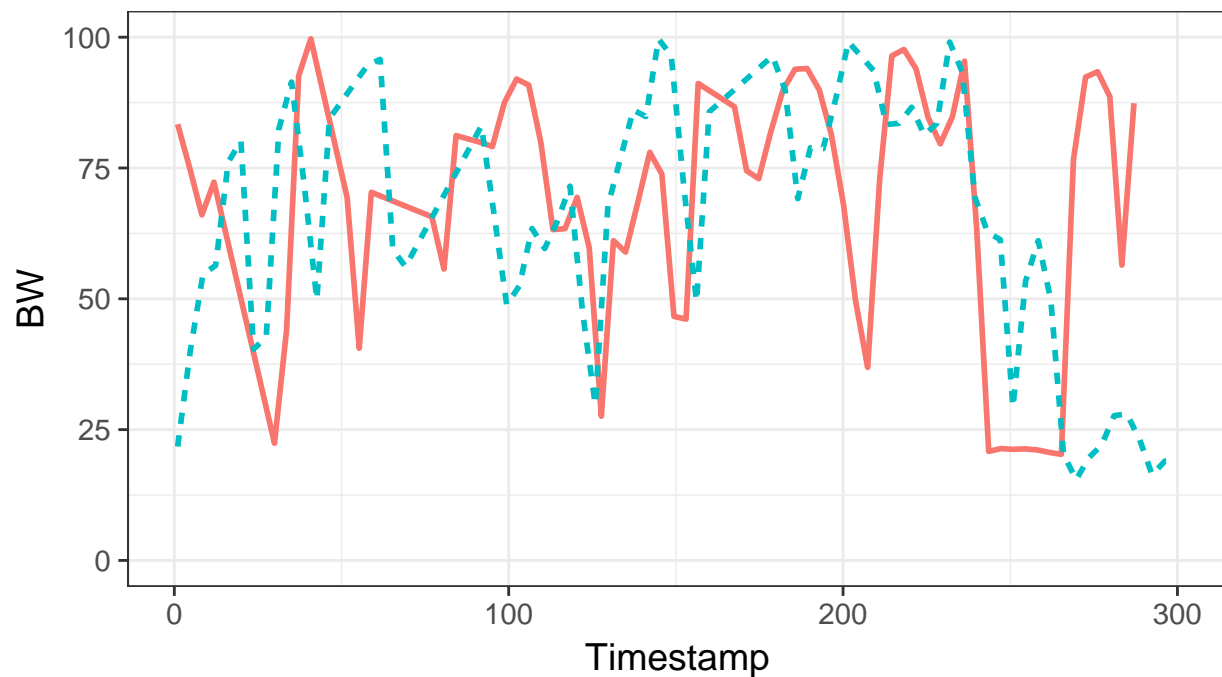
Tenant — Tenant 1 @ 100 MB/s ---- Tenant 2 @ 100 MB/s


```
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. ncmax= 200
```

```
## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 214
```

```
## Warning: Removed 26 rows containing missing values (geom_smooth).
```

BSC 100 / 100

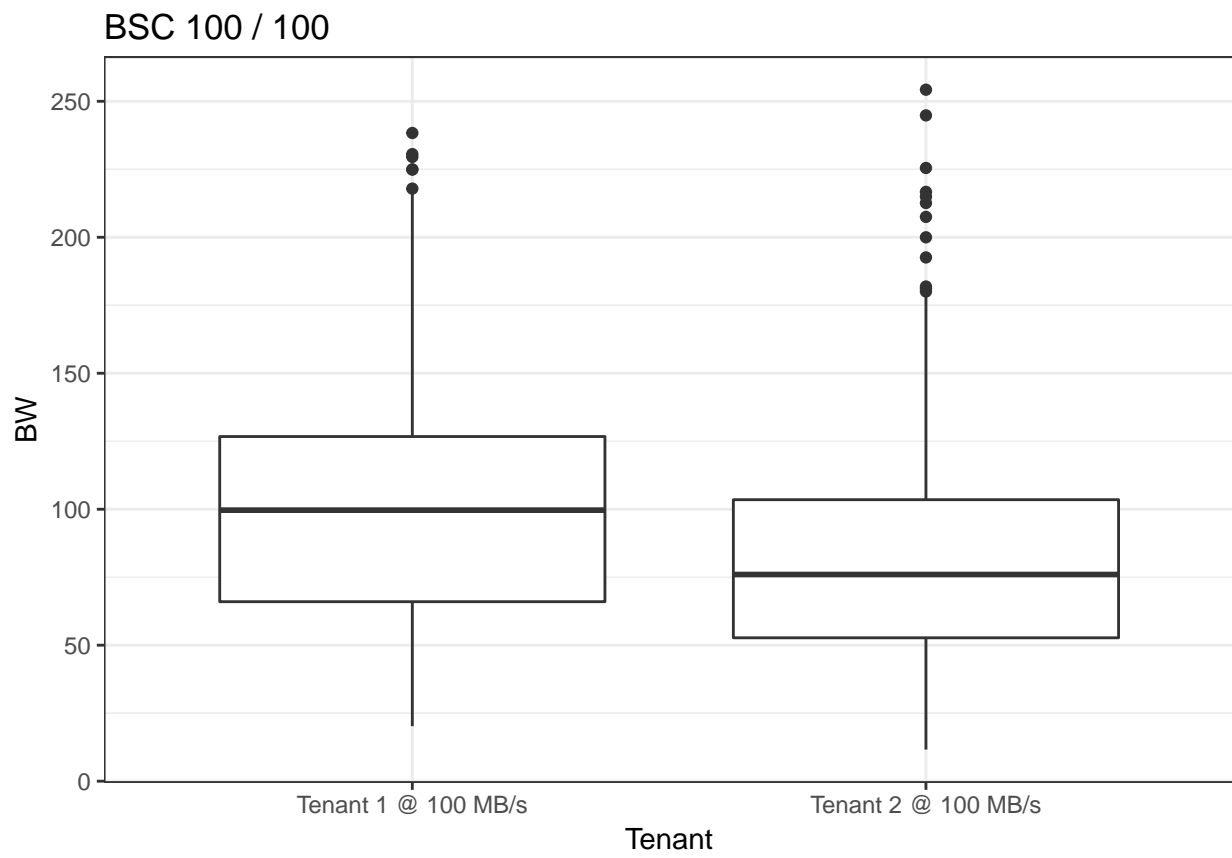**Tenant** — Tenant 1 @ 100 MB/s - - Tenant 2 @ 100 MB/s


```
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. ncmax= 200

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 214

## Warning: Removed 26 rows containing missing values (geom_smooth).
```
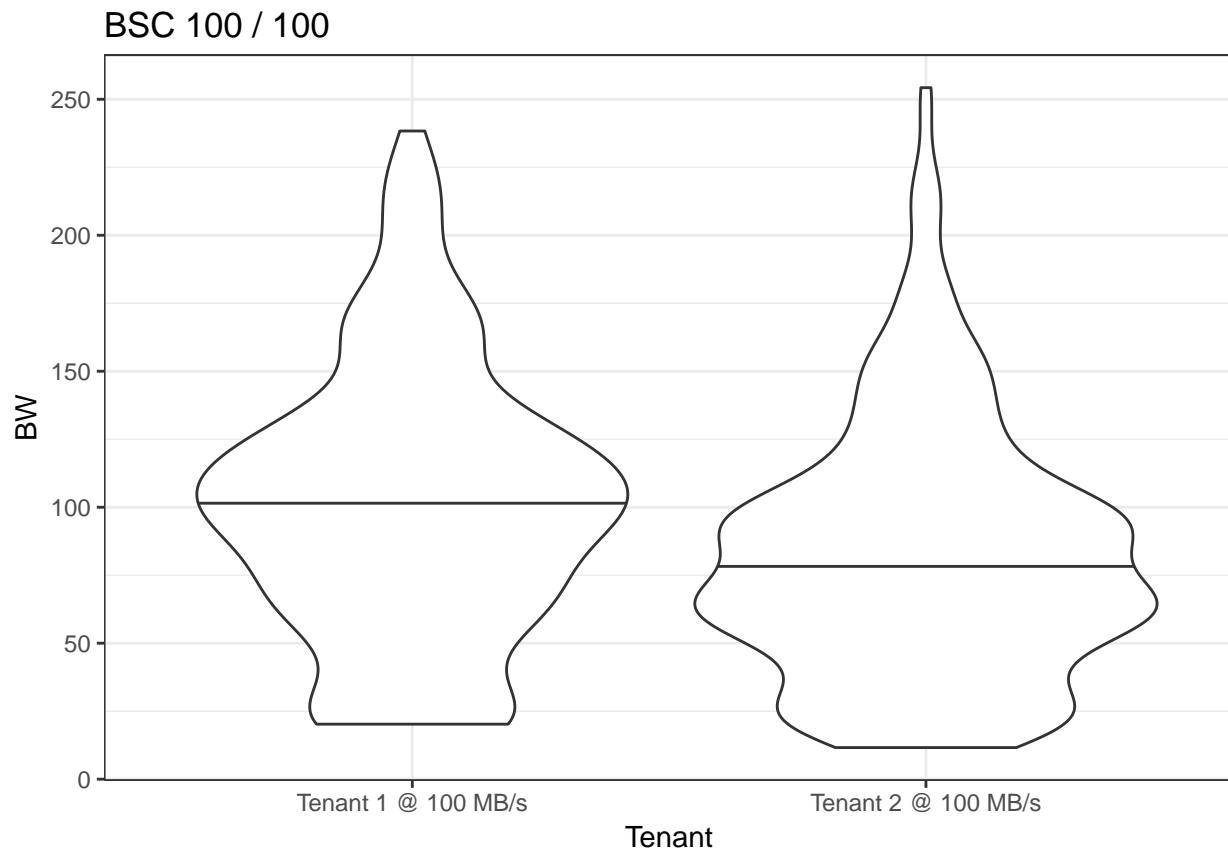
```
dev.off()
```

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

```
draw2(dades)
```
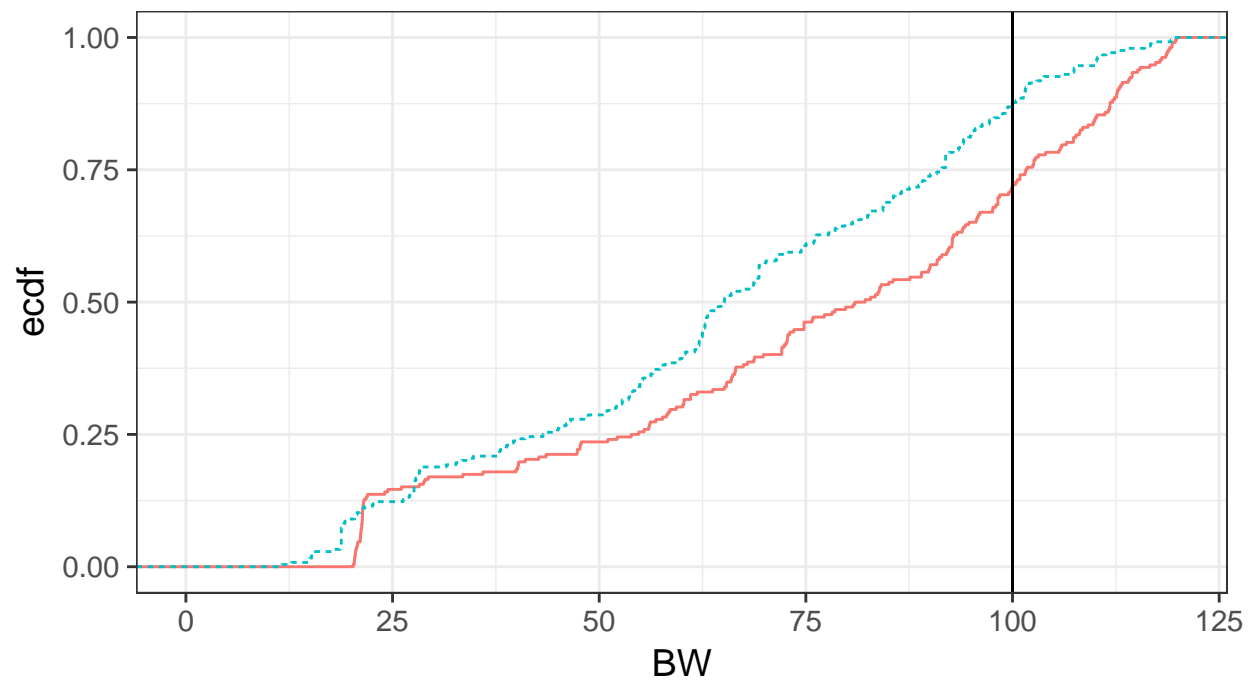
BSC 100 / 100

```
draw3(dades)
```

BSC 100 / 100

```
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


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

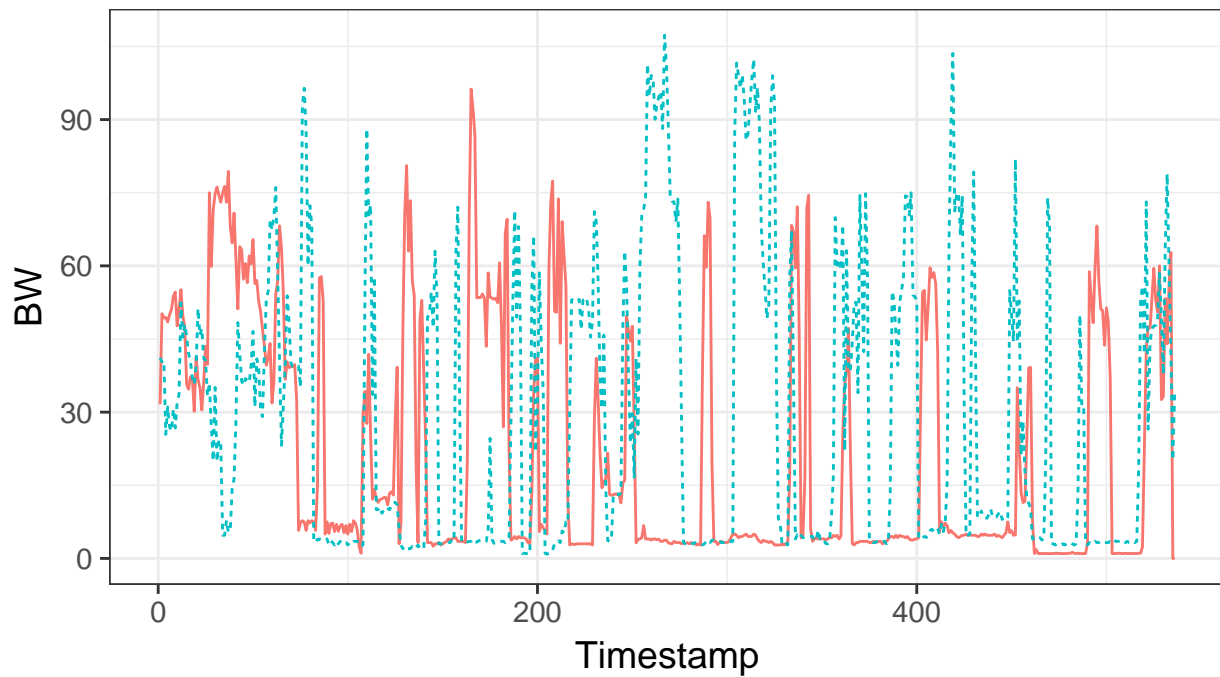## Warning: Removed 144 rows containing non-finite values (stat_ecdf).

```r
dev.off()
```

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

```r
dades <- loadData("../log42/log42.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'
```

```
## Warning: Removed 7 rows containing missing values (geom_smooth).
```

URV 50 / 50

Tenant ── Tenant 1 @ 50 MB/s ─ ─ Tenant 2 @ 50 MB/s
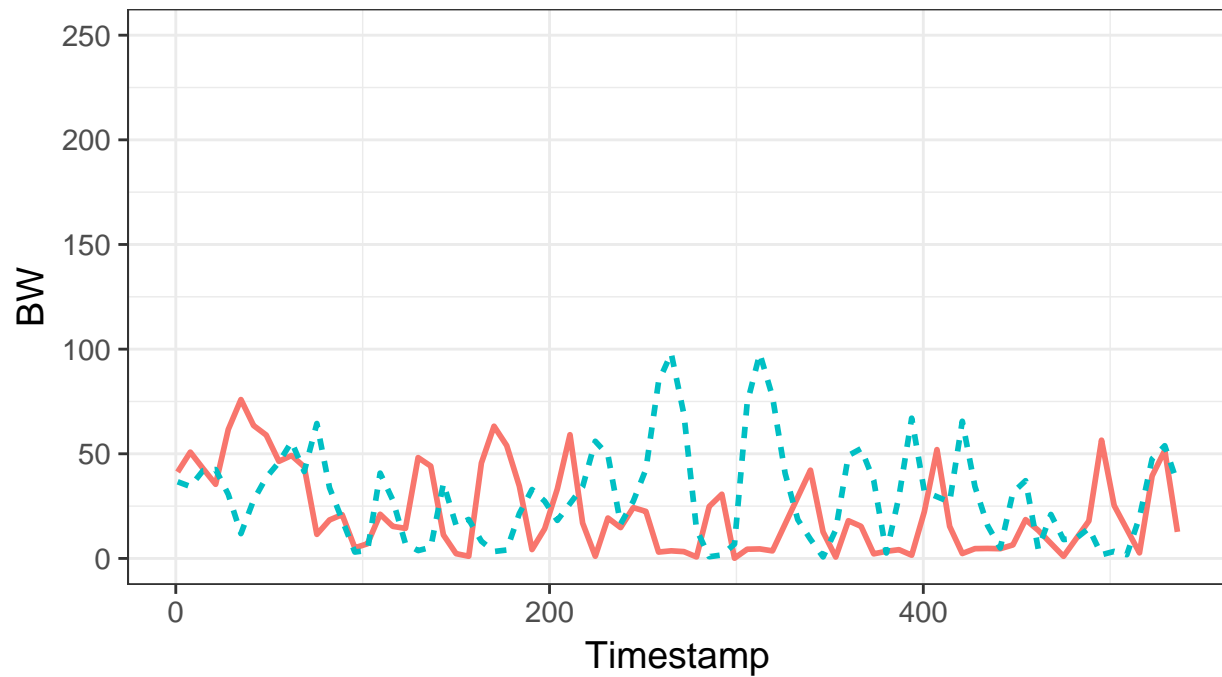

```
pdf(file="URV2-50_50_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

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

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

```
## Warning: Removed 7 rows containing missing values (geom_smooth).
```
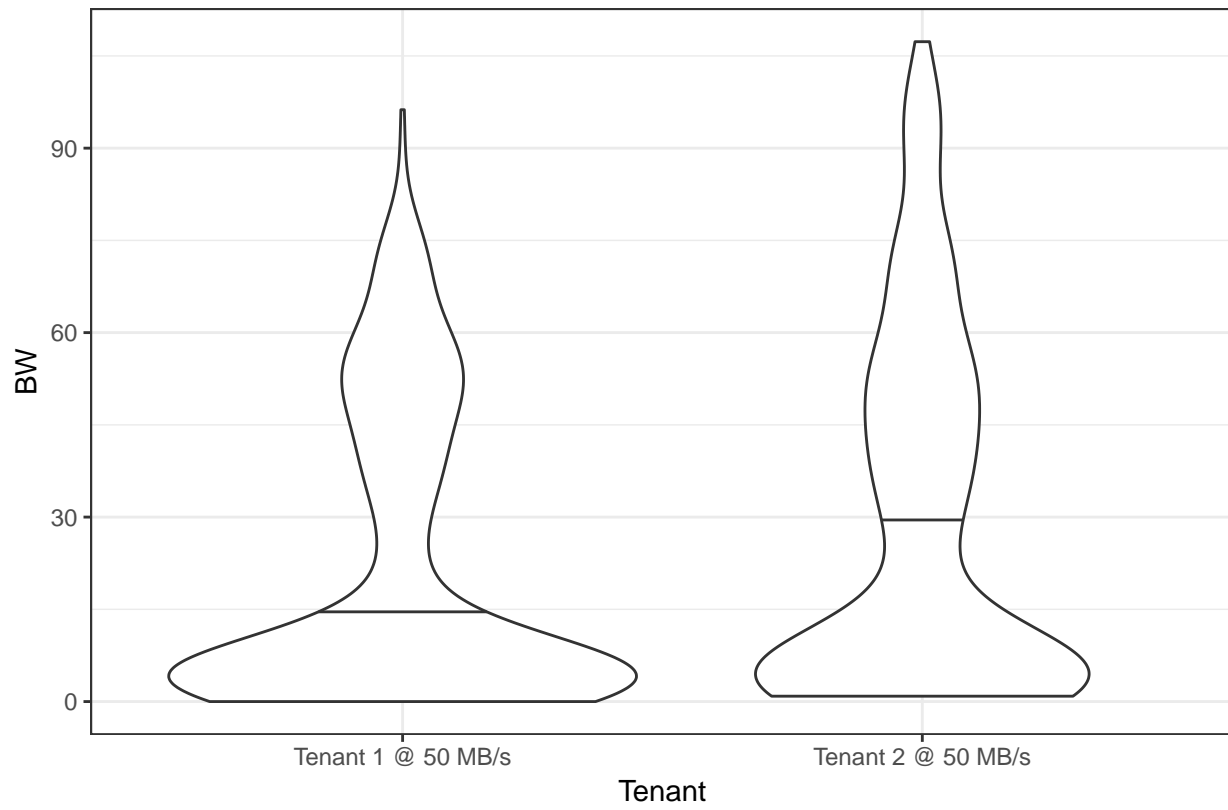
```
dev.off()
```

```
## pdf
##   2
```
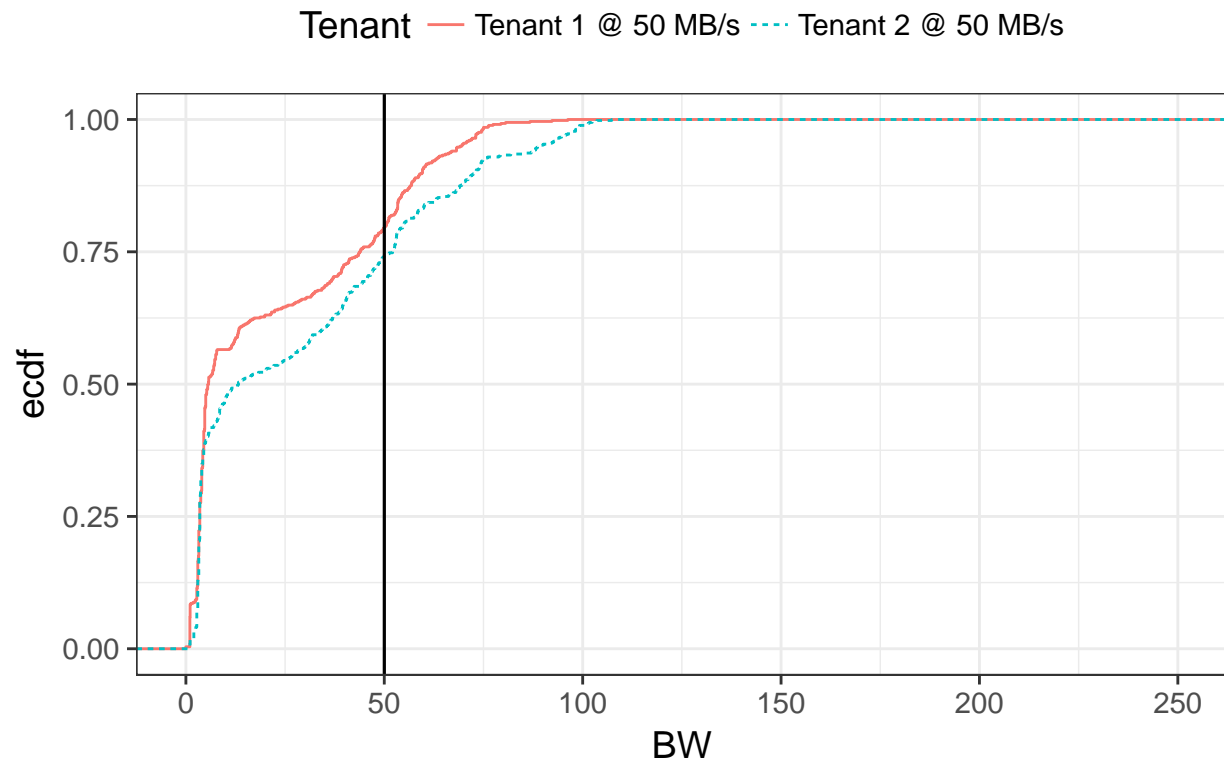
```
draw2(dades)
```
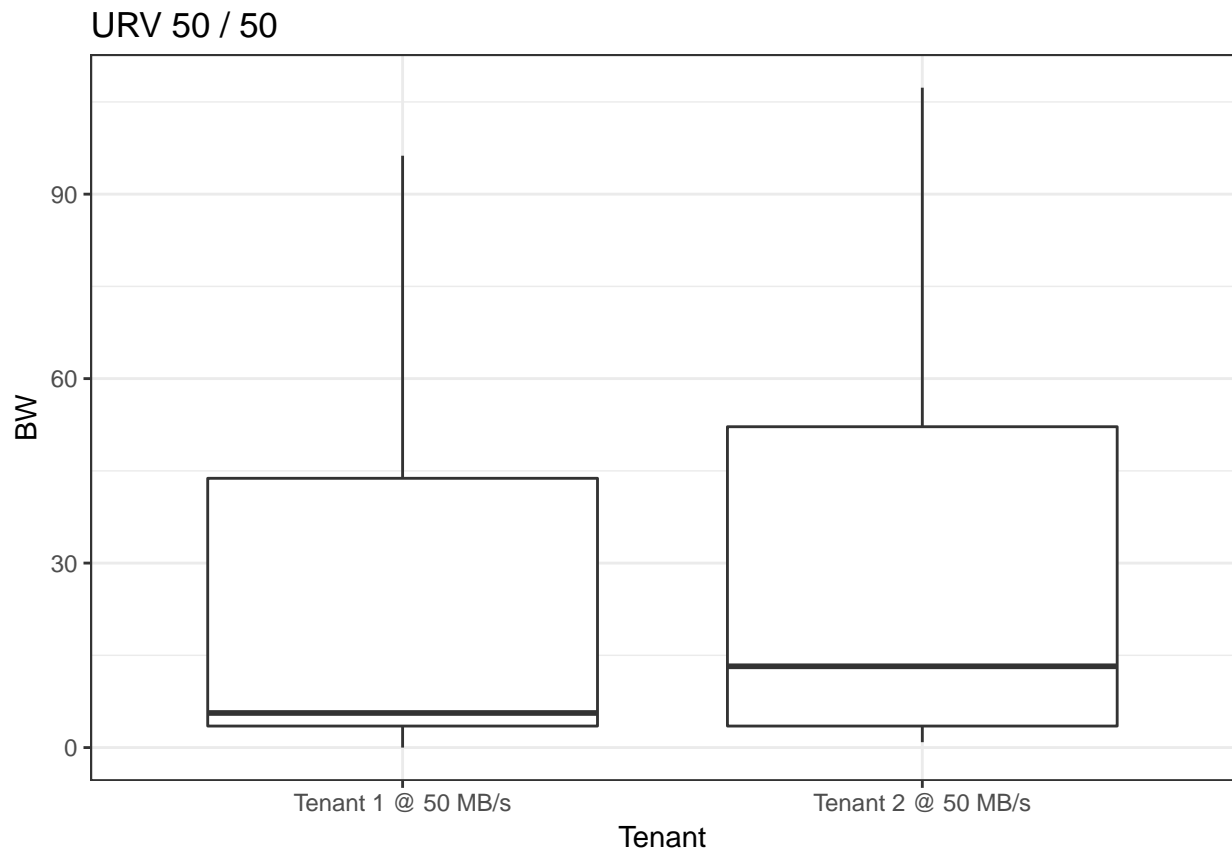
URV 50 / 50


```
draw3(dades)
```

URV 50 / 50

```
draw4(dades)+scale_x_continuous(limits=c(0,250))
```
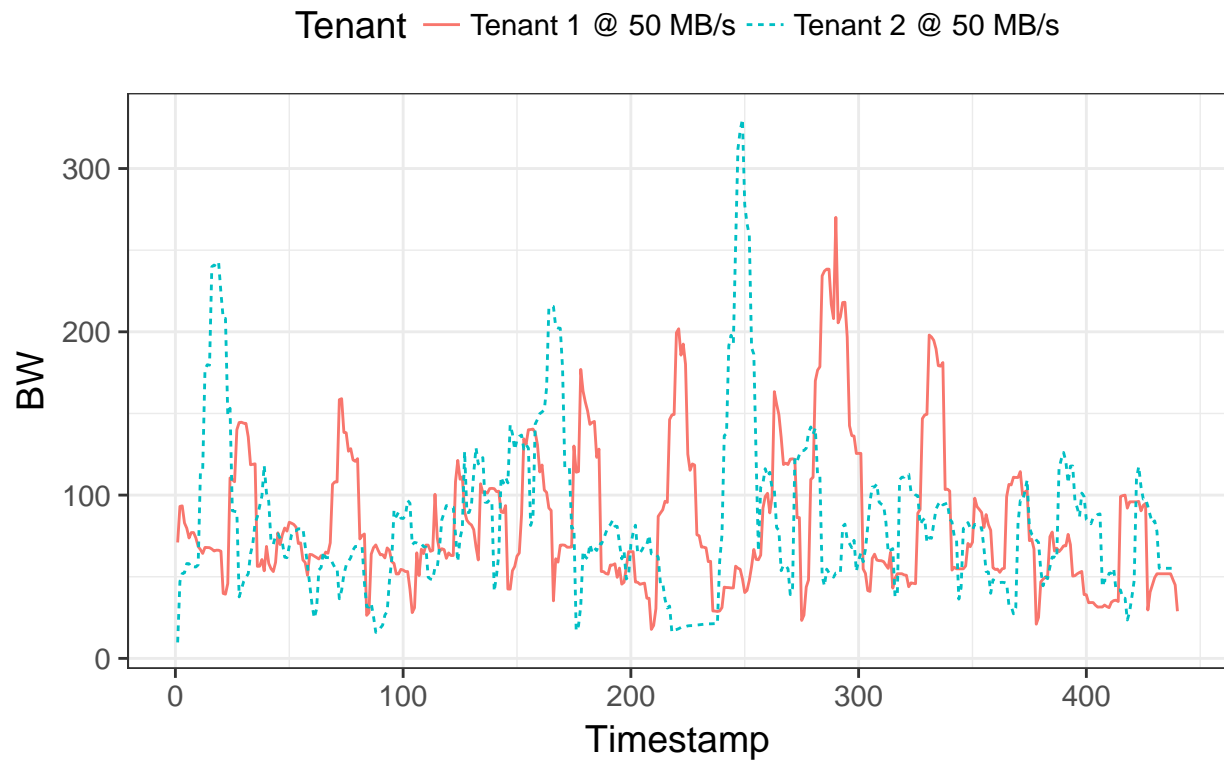
URV 50 / 50


```r
pdf(file="URV2-50_50_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,250))
dev.off()
```

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

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

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

BSC 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'
```

```
## Warning: Removed 9 rows containing non-finite values (stat_smooth).
```
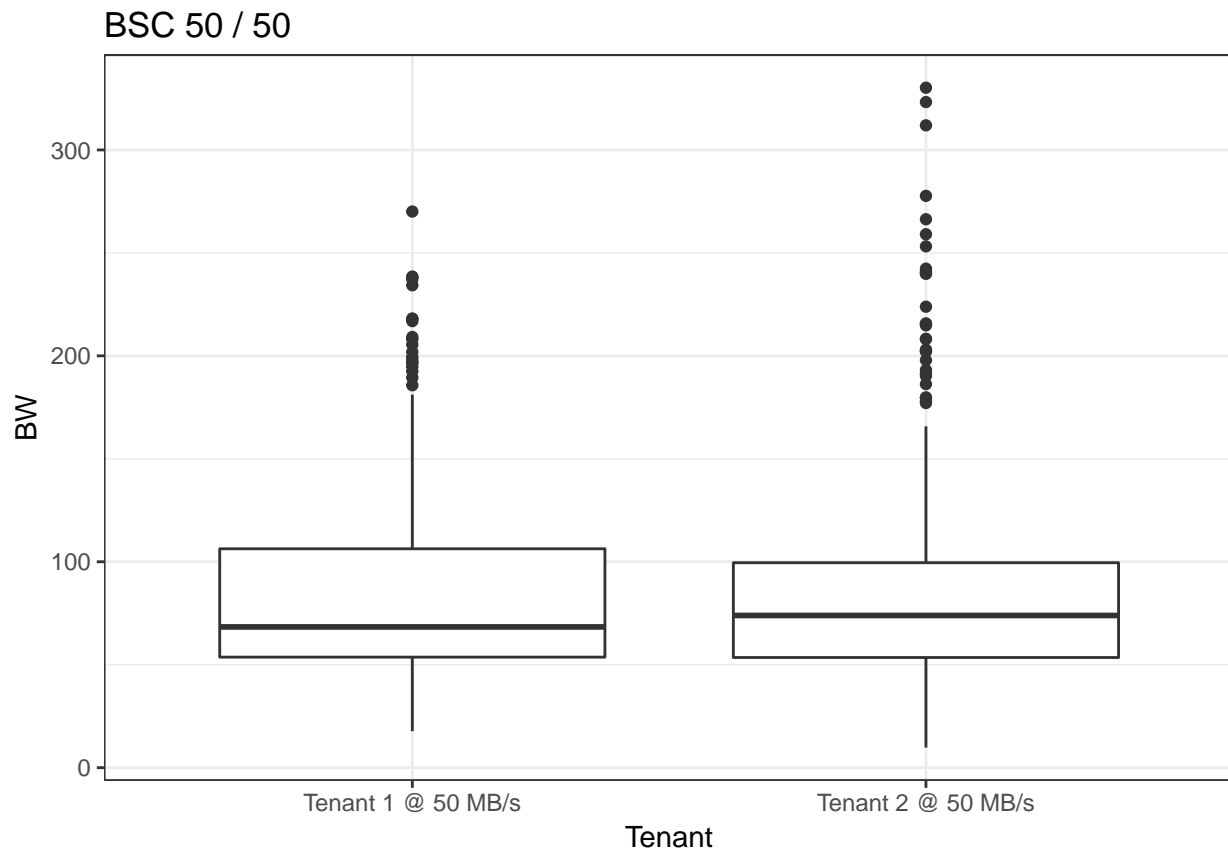
BSC 50 / 50

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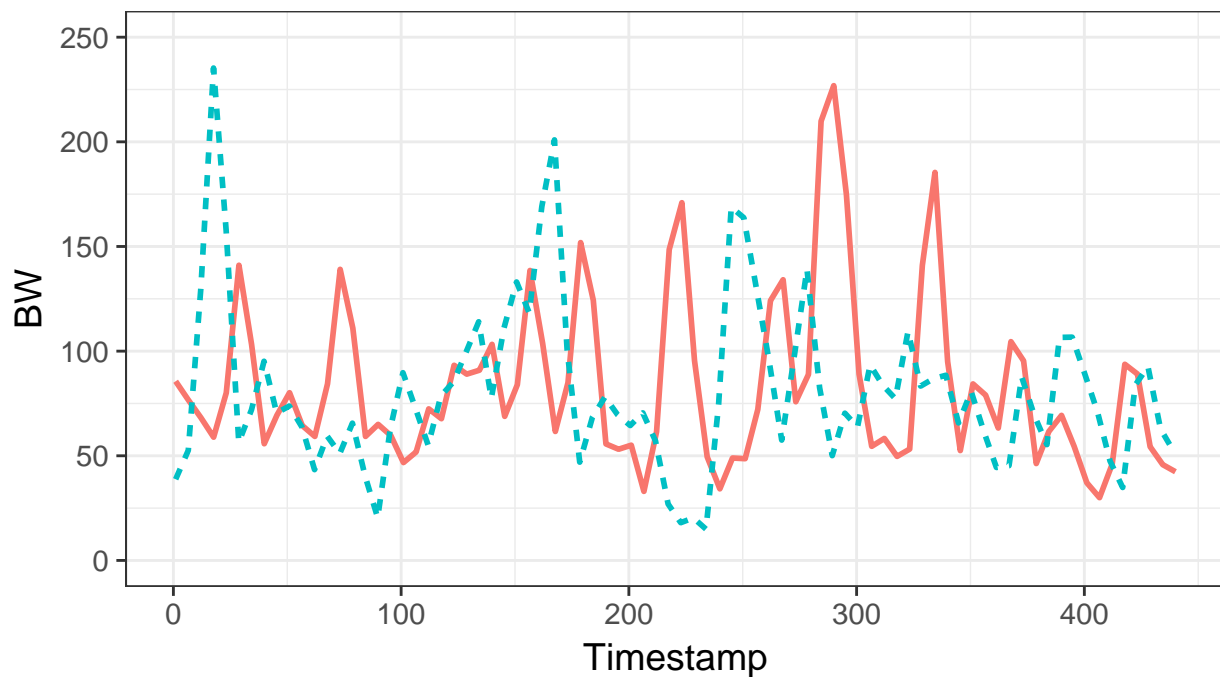

```
pdf(file="BSC50_50_Timeline.pdf",width = 7, height= 5)
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```

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

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

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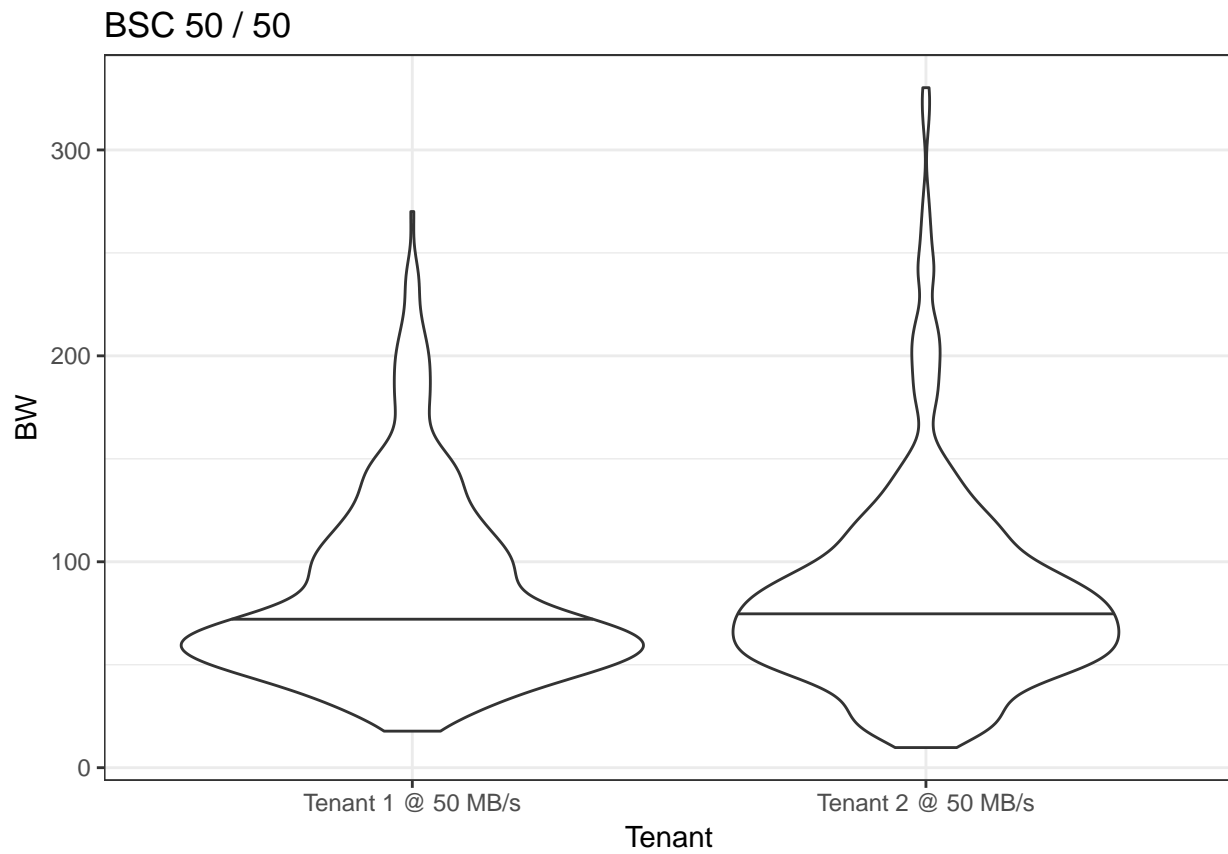
```
dev.off()
```

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

```
draw2(dades)
```

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

BSC 50 / 50


```
draw3(dades)
```

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

BSC 50 / 50
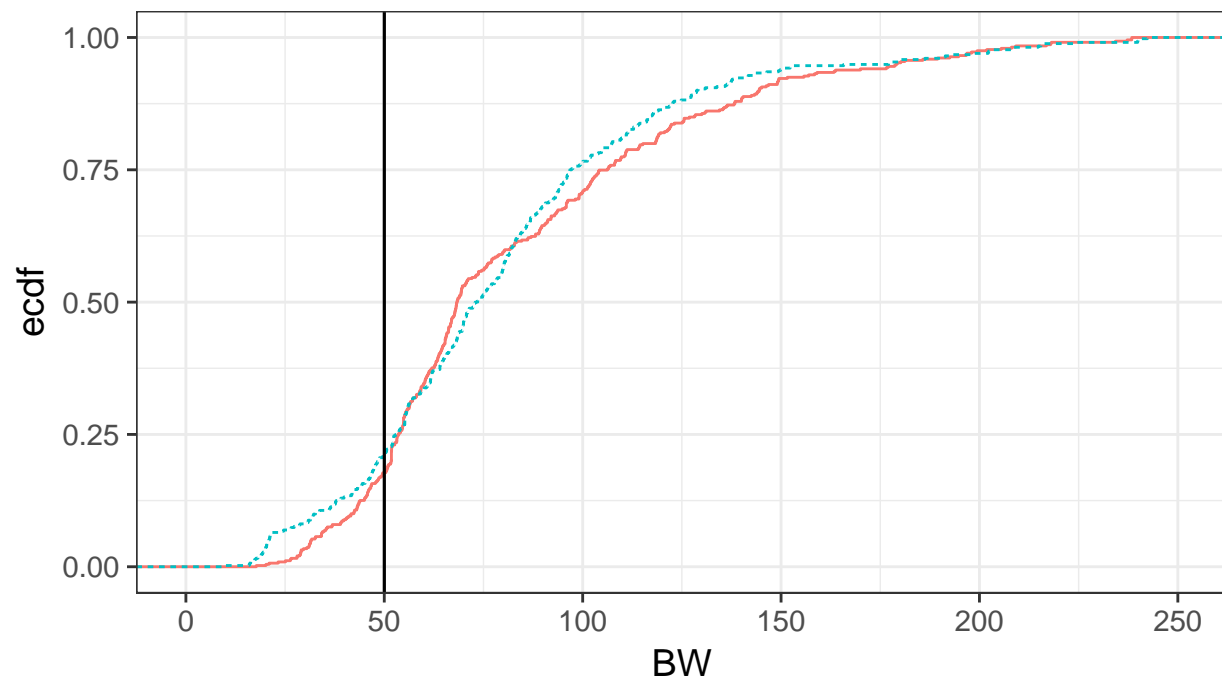
```
draw4(dades)+scale_x_continuous(limits=c(0,250))
```

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

BSC 50 / 50


```r
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).
```
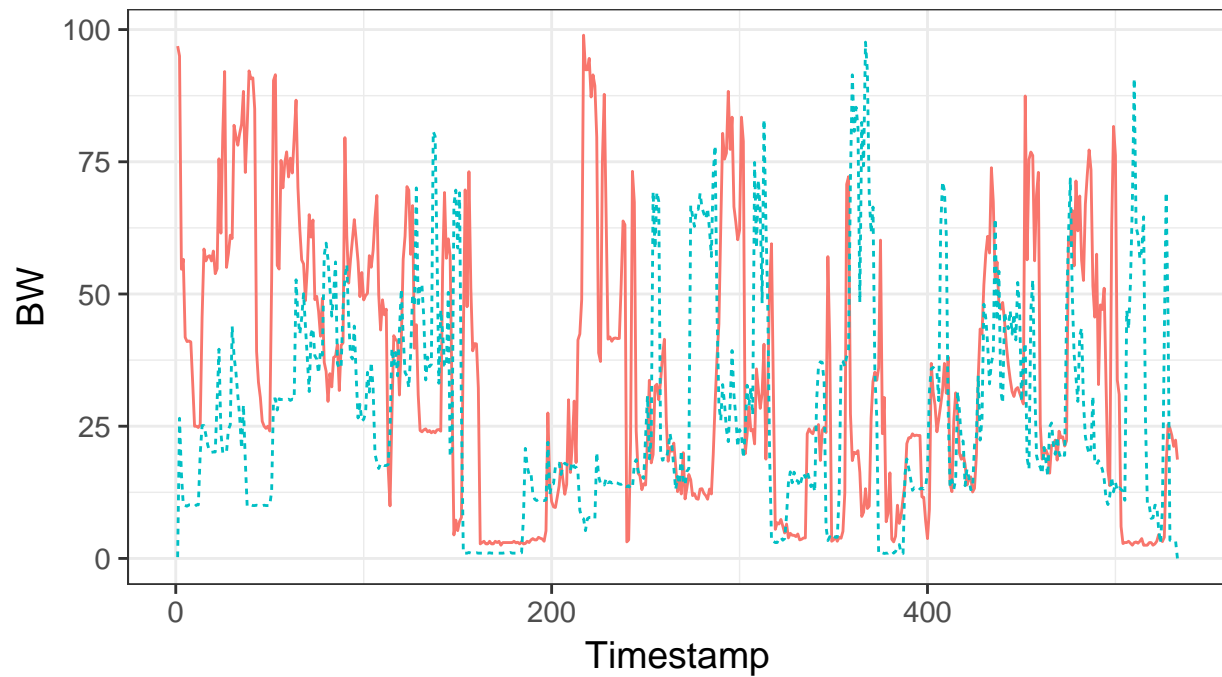
```r
dev.off()
```

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

```r
dades <- loadData("../log45/log45.csv","URV 20 / 10",10,20)
draw1(dades)
```

URV 20 / 10

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


```
drawsmooth(dades)+scale_y_continuous(limits=c(0,250))
```
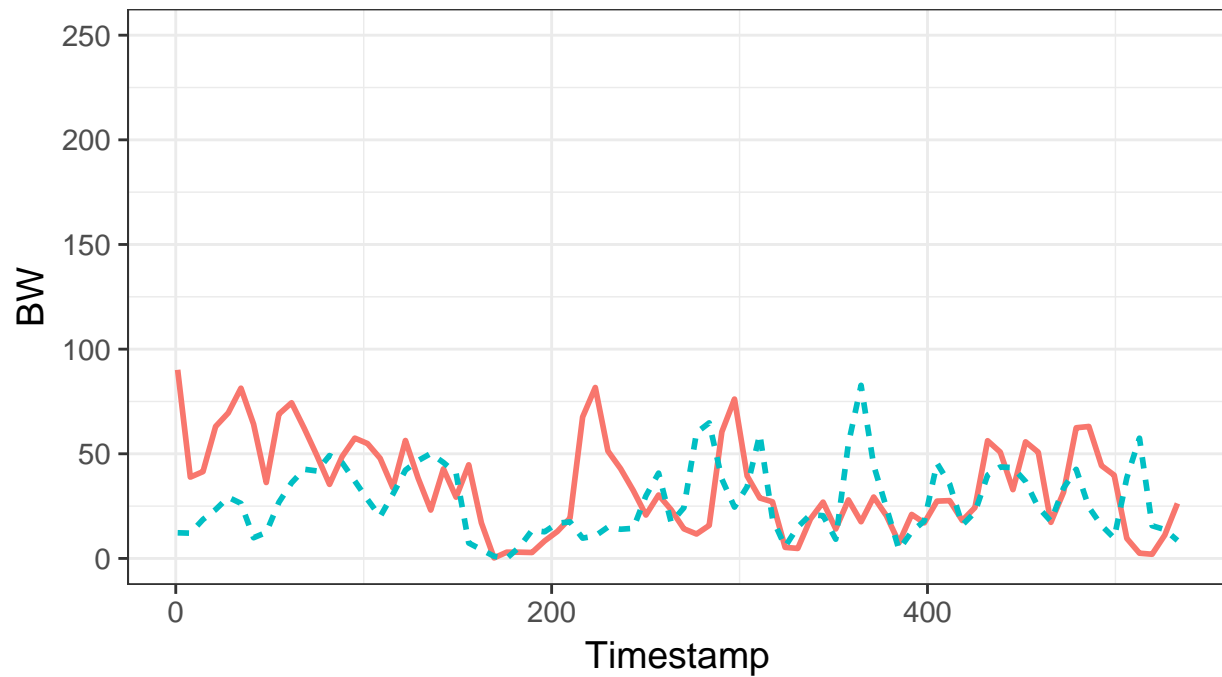
Warning: Ignoring unknown parameters: degree

`geom_smooth()` using method = 'loess'

Warning: Removed 2 rows containing missing values (geom_smooth).

URV 20 / 10

Tenant ── Tenant 1 @ 20 MB/s ╌╌ Tenant 2 @ 10 MB/s


```
pdf(file="URV2-20_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'
```
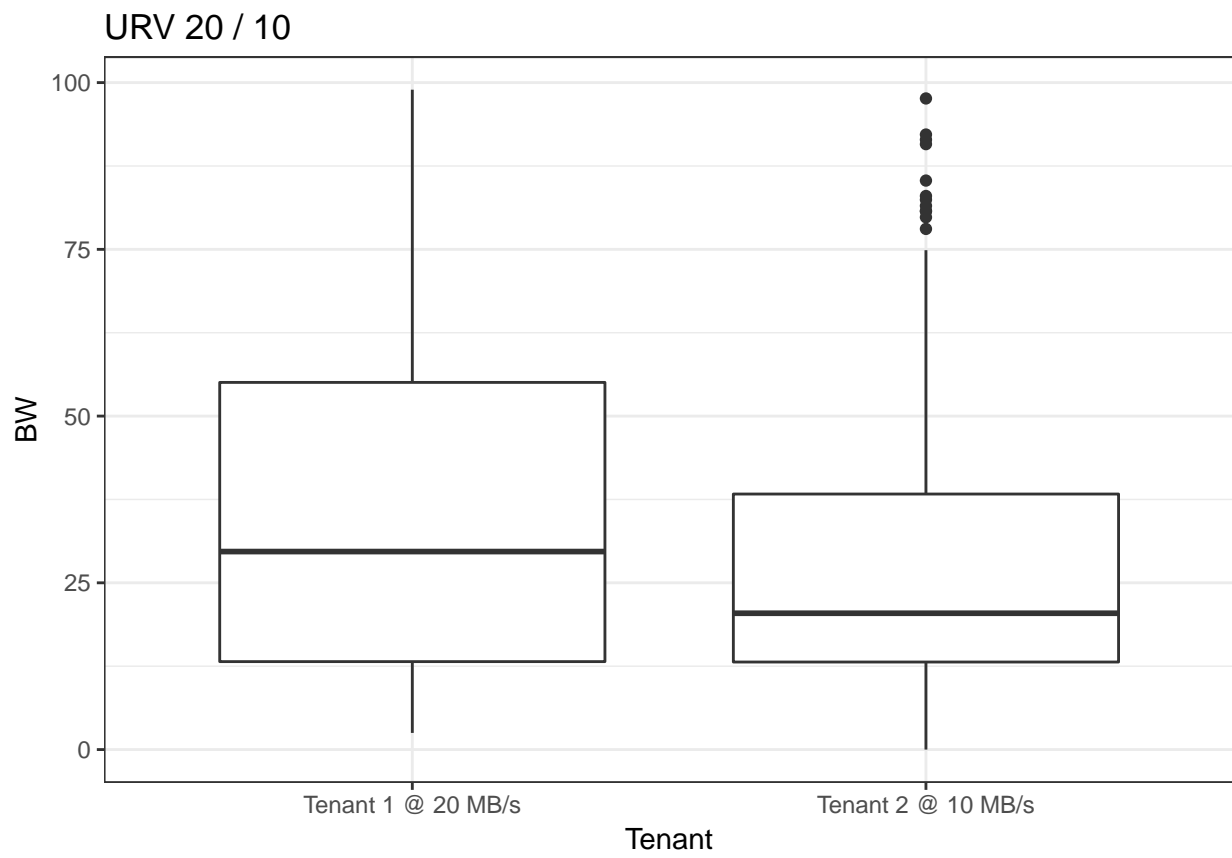
```
## Warning: Removed 2 rows containing missing values (geom_smooth).
```
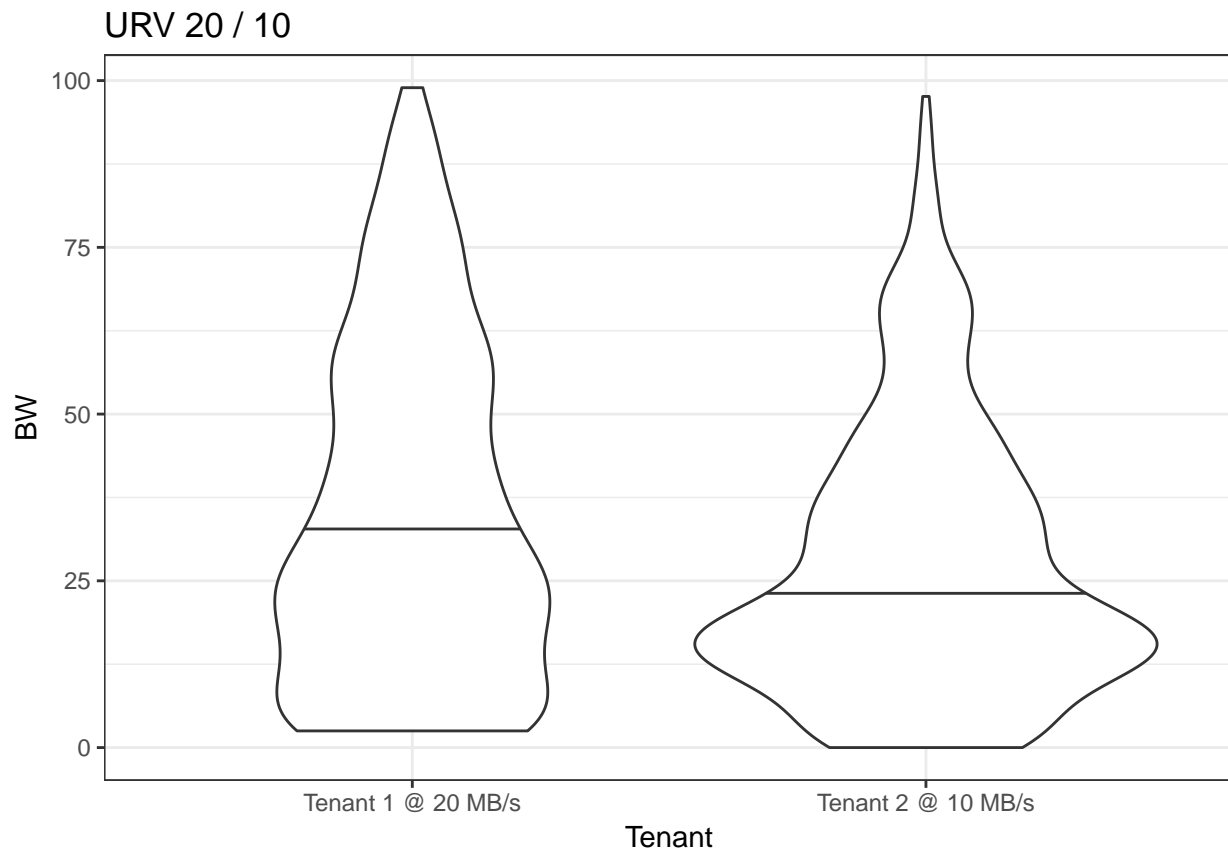
```
dev.off()
```

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

```
draw2(dades)
```

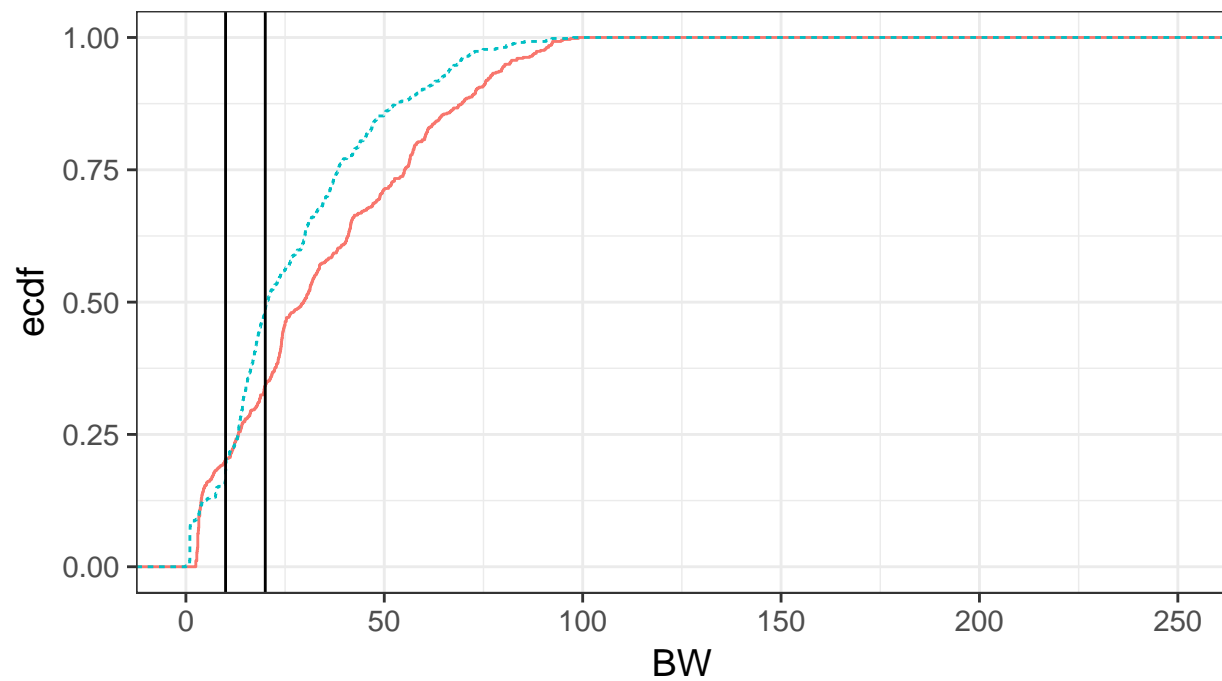URV 20 / 10

```
draw3(dades)
```

URV 20 / 10

```
draw4(dades)+scale_x_continuous(limits=c(0,250))
```
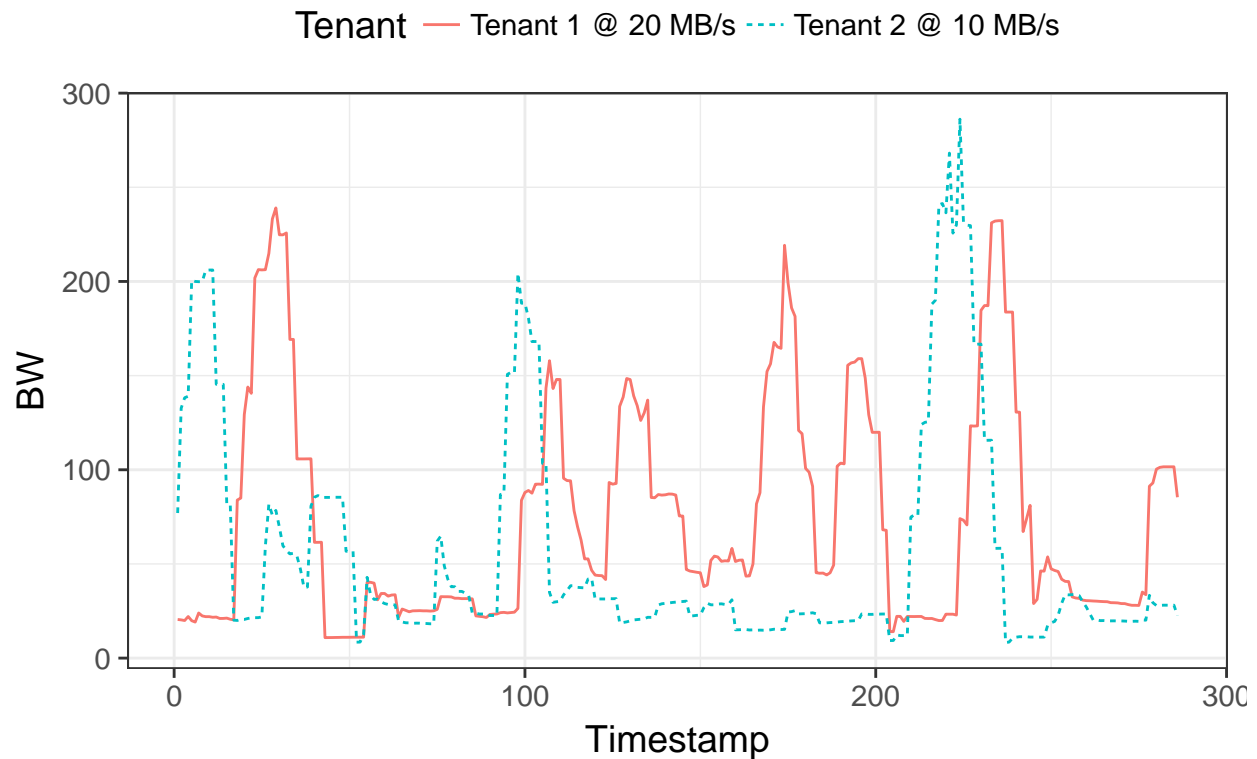
URV 20 / 10


```r
pdf(file="URV2-20_10_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,250))
dev.off()
```

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

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

BSC 20 / 10

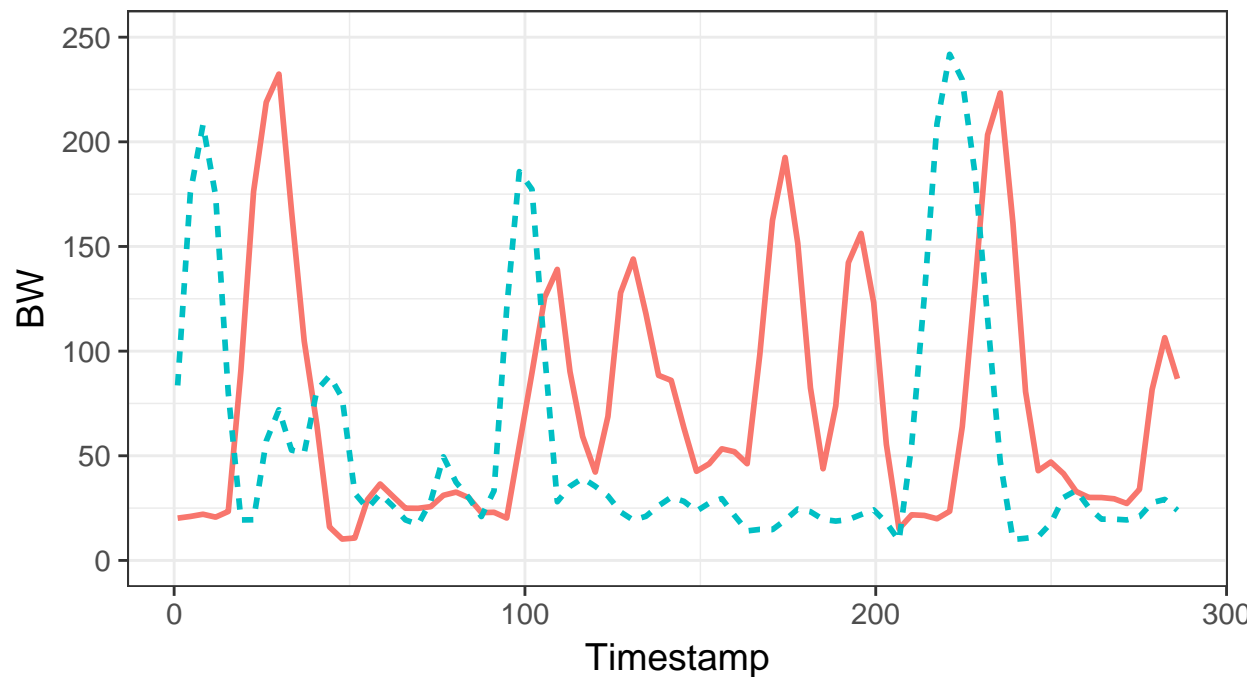Tenant —— Tenant 1 @ 20 MB/s ---- Tenant 2 @ 10 MB/s


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

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

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

## Warning: Removed 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
```

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
```
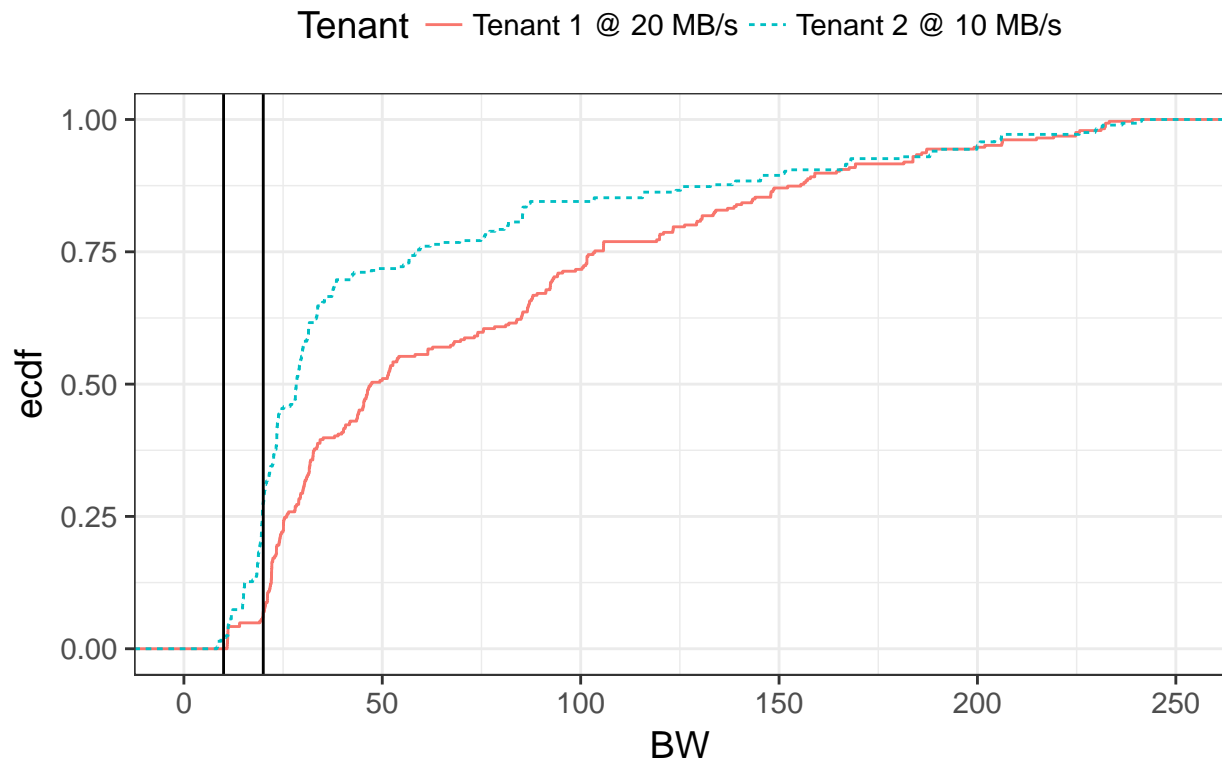
```
dev.off()
```

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

```
draw2(dades)
```
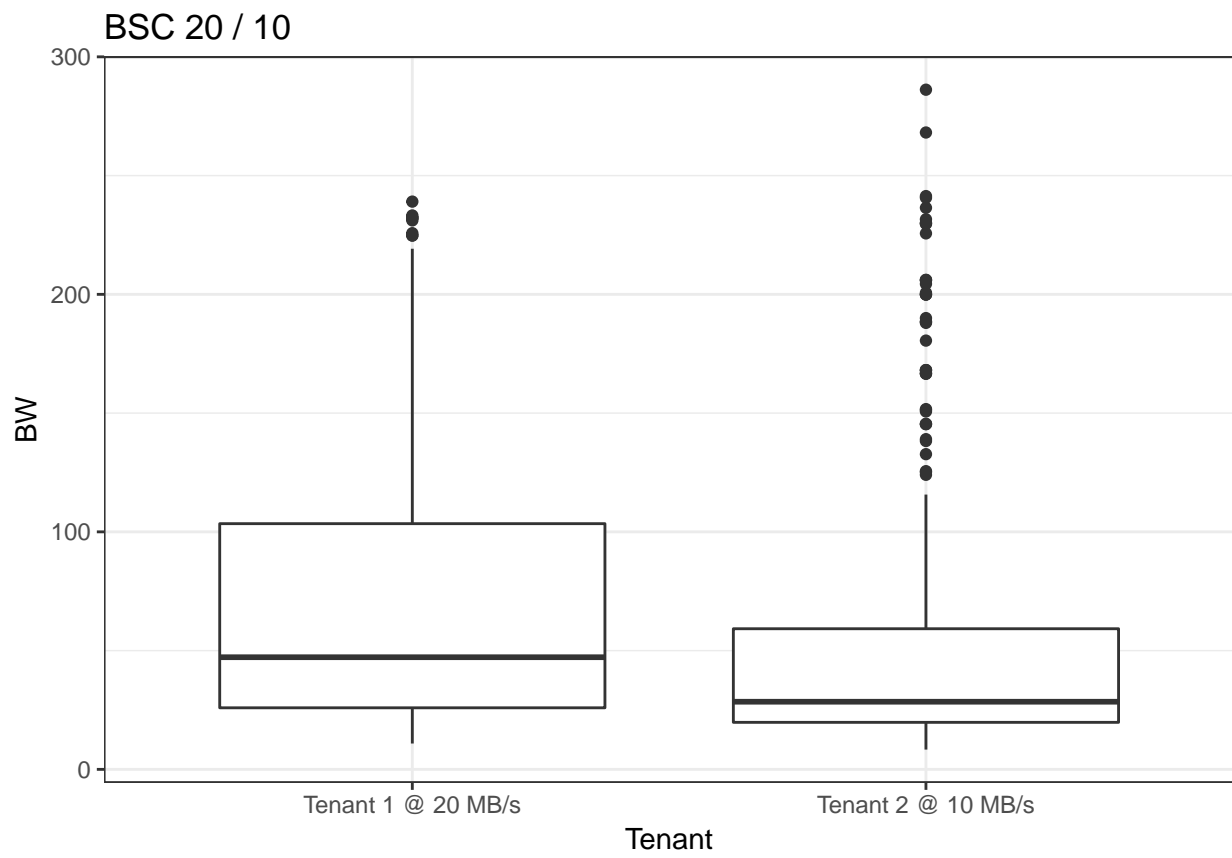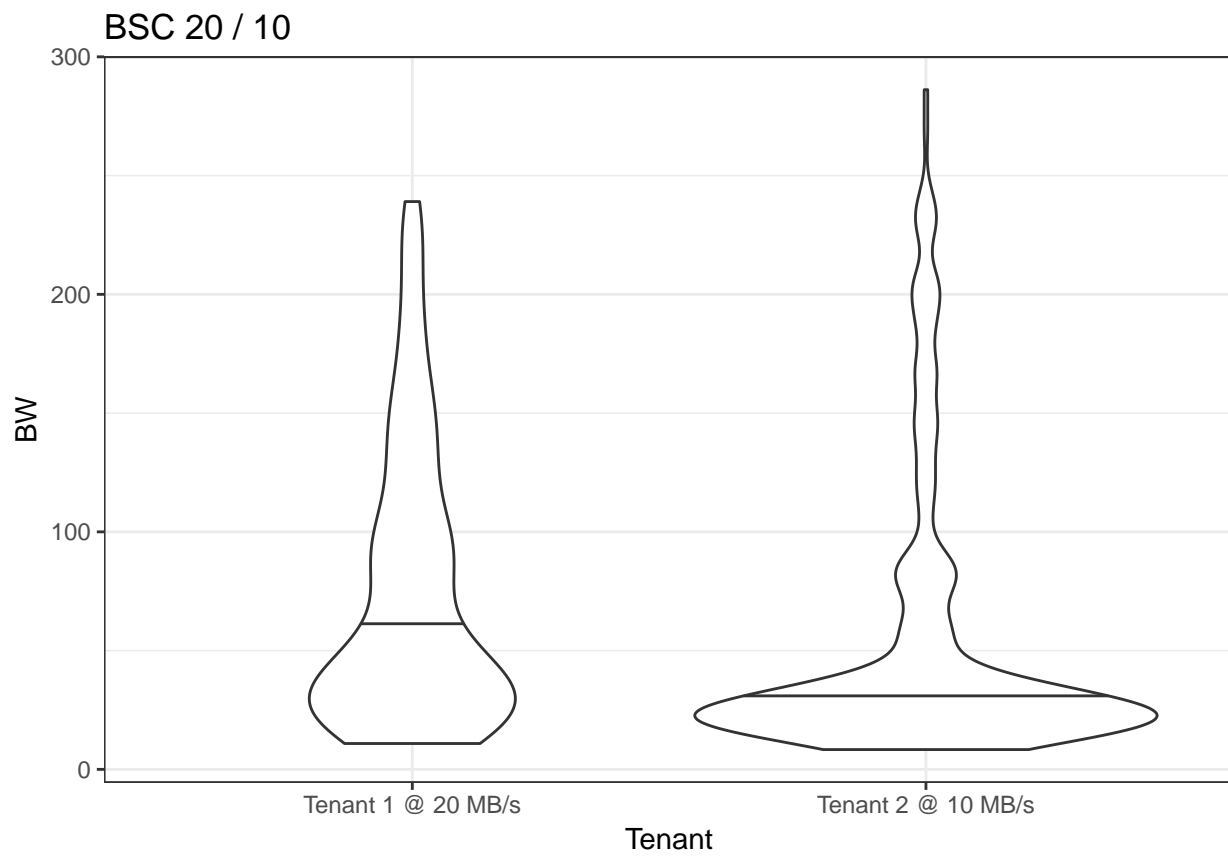
BSC 20 / 10

```
draw3(dades)
```

BSC 20 / 10

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

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

BSC 20 / 10

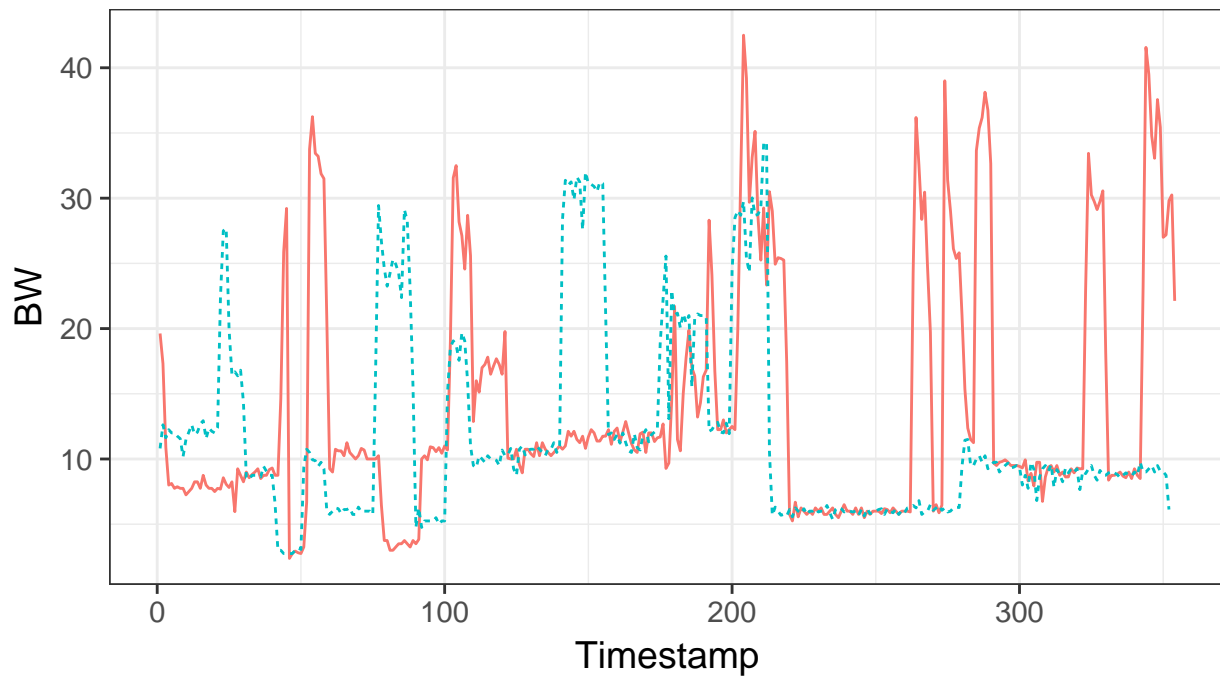Tenant — Tenant 1 @ 20 MB/s ---- Tenant 2 @ 10 MB/s


```
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("../log46/log46.csv","URV 50 / 20 / Outside interference of 10 MB/s ",20,50)
draw1(dades)
```

Warning: Removed 2 rows containing missing values (geom_path).

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))
```
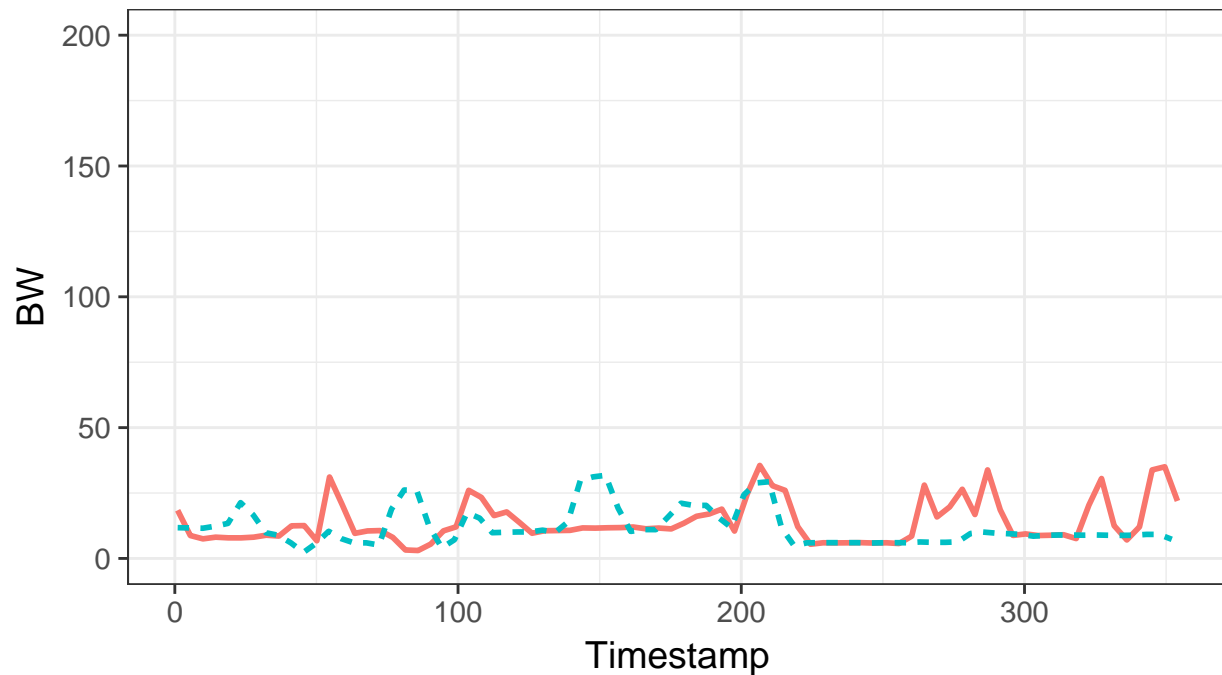
Warning: Ignoring unknown parameters: degree

`geom_smooth()` using method = 'loess'

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

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

Tenant ⎯ Tenant 1 @ 50 MB/s ▪ ▪ Tenant 2 @ 20 MB/s


```
pdf(file="URV2-50_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 2 rows containing non-finite values (stat_smooth).
```
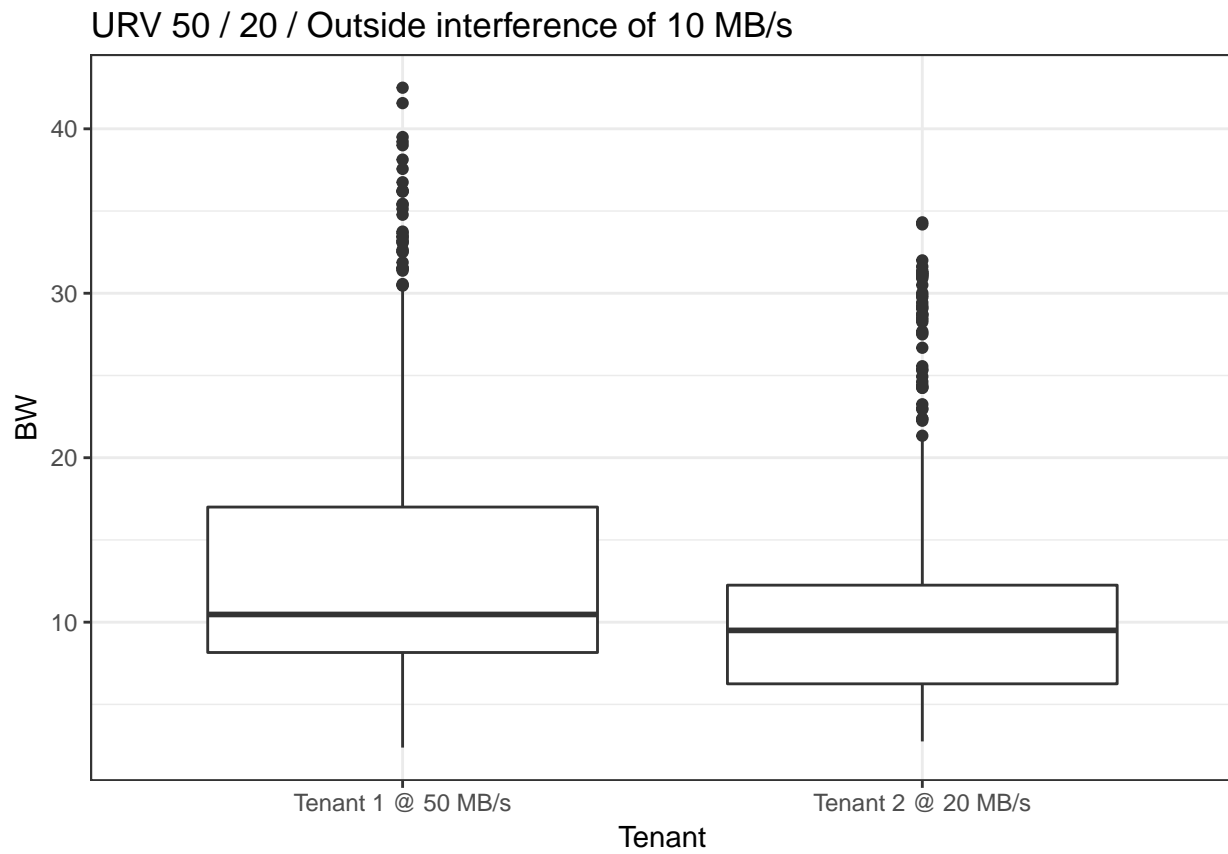
```
dev.off()
```
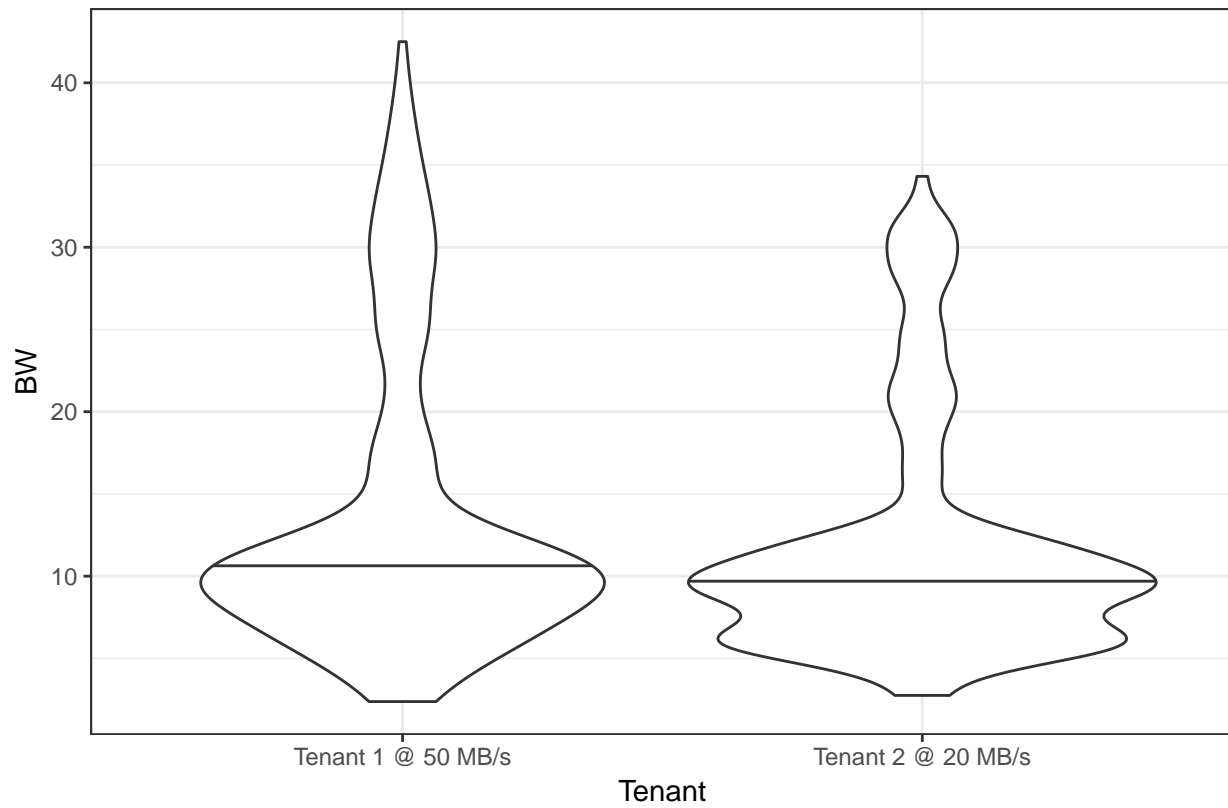
```
## pdf
##   2
```

```
draw2(dades)
```

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

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


```
draw3(dades)
```

```
## Warning: Removed 2 rows containing non-finite values (stat_ydensity).
```
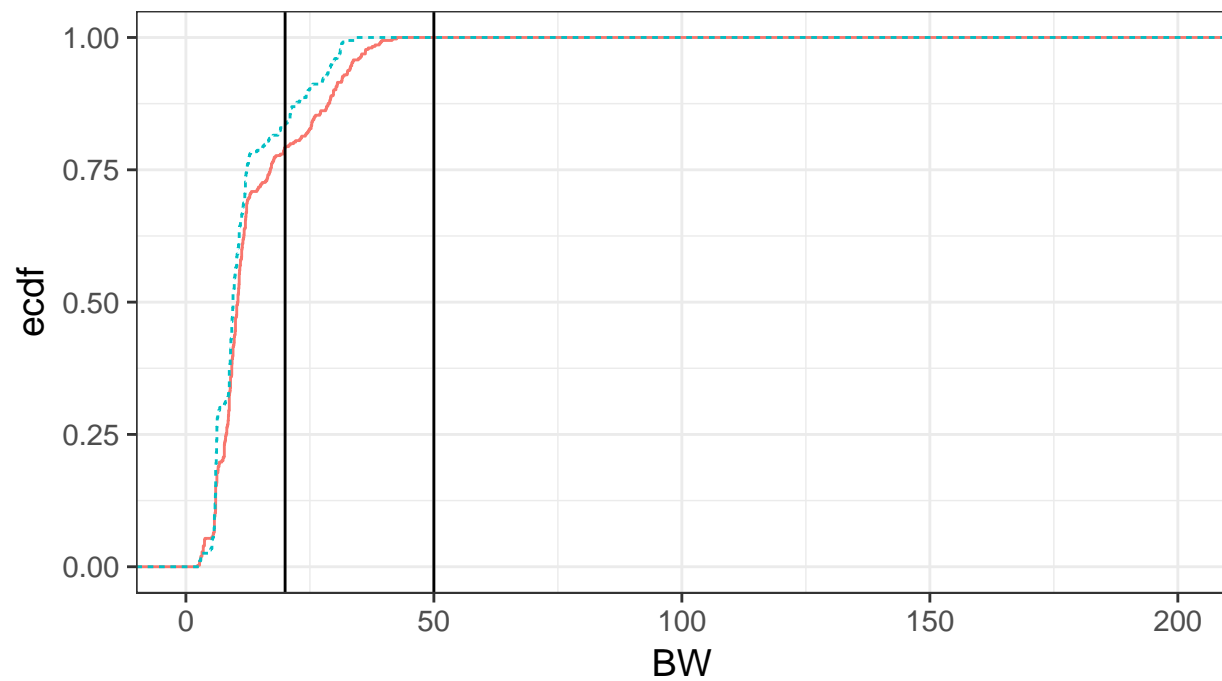
URV 50 / 20 / Outside interference of 10 MB/s


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

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

URV 50 / 20 / Outside interference of 10 MB/s
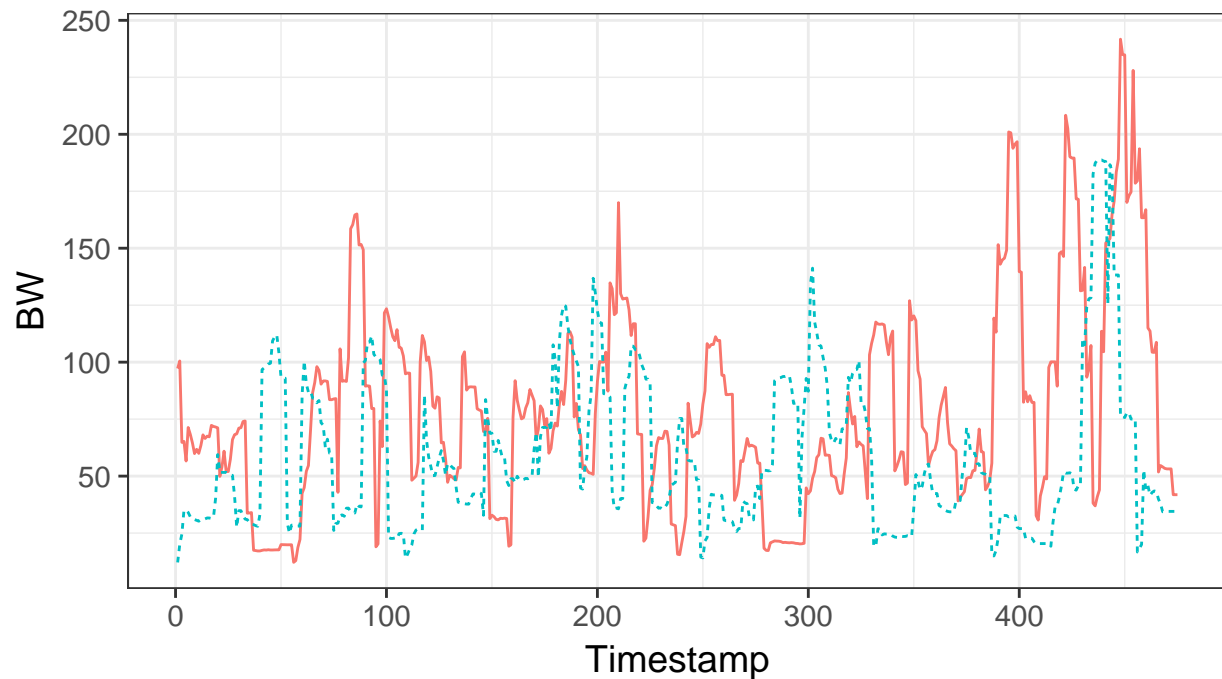
Tenant ── Tenant 1 @ 50 MB/s ┄┄ Tenant 2 @ 20 MB/s


```
pdf(file="URV2-50_20_10i_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,200))
```

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

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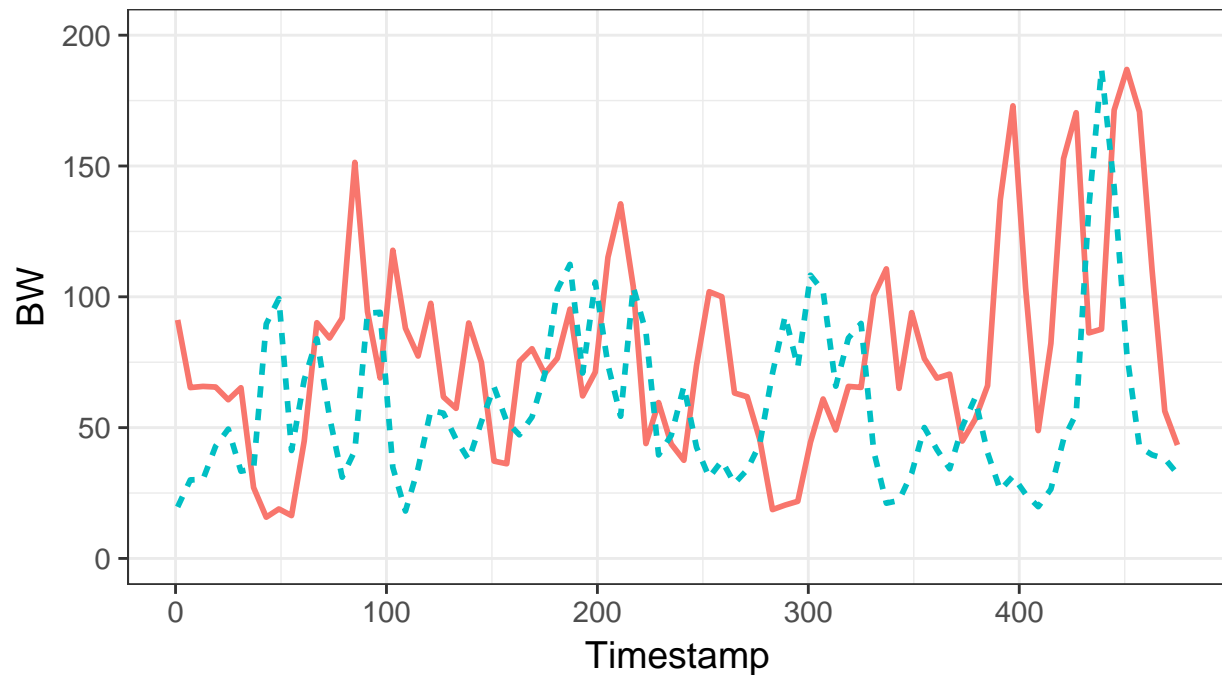
```
## Warning: Ignoring unknown parameters: degree
```

```
## `geom_smooth()` using method = 'loess'
```
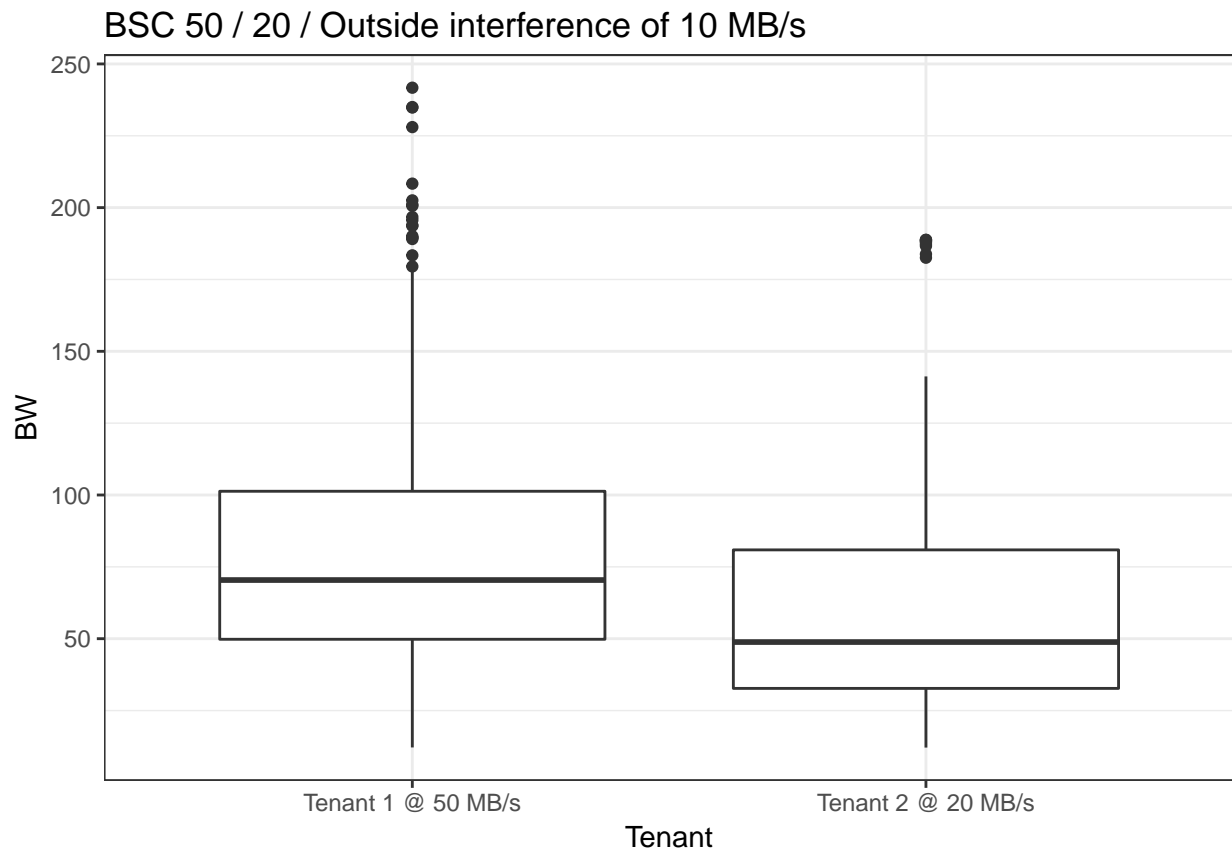
```
## Warning: Removed 8 rows containing non-finite values (stat_smooth).
```

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).
```
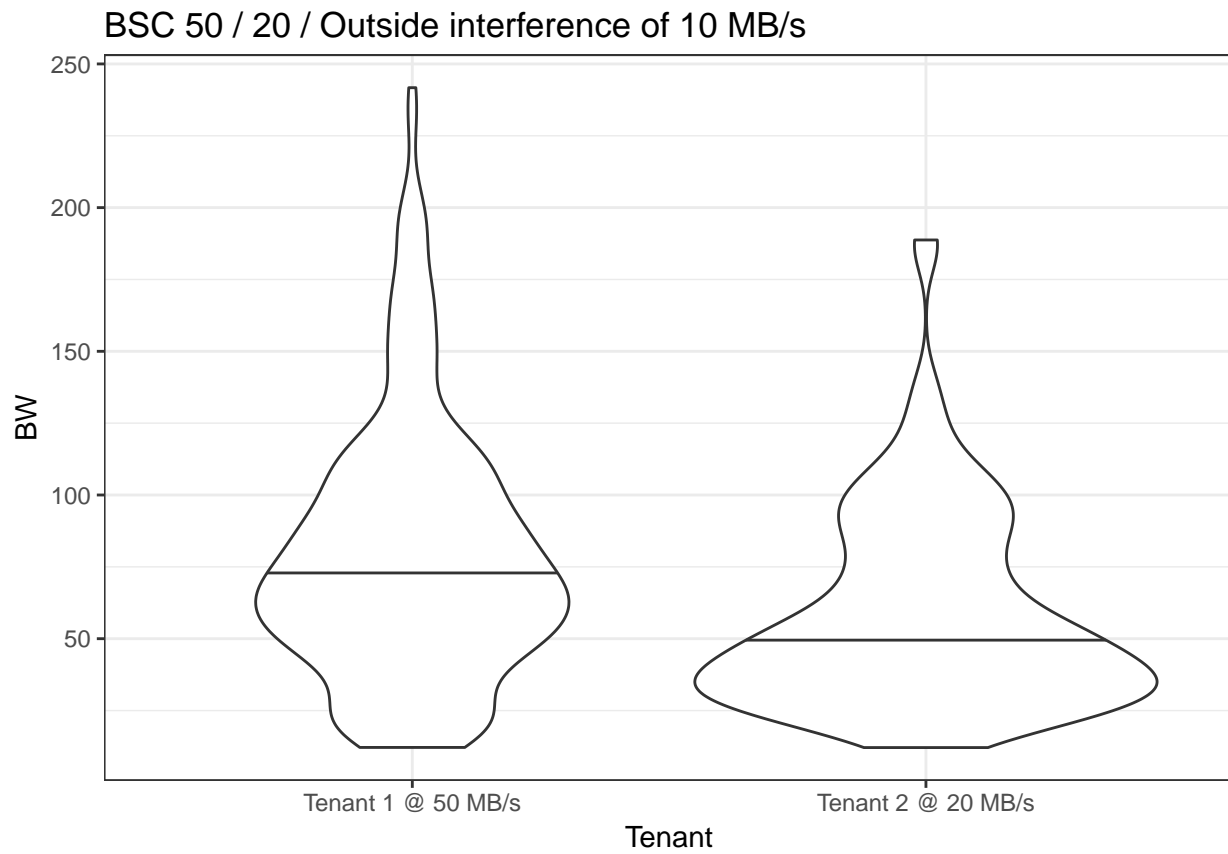
```
dev.off()
```

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

```
draw2(dades)
```

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

```
draw3(dades)
```

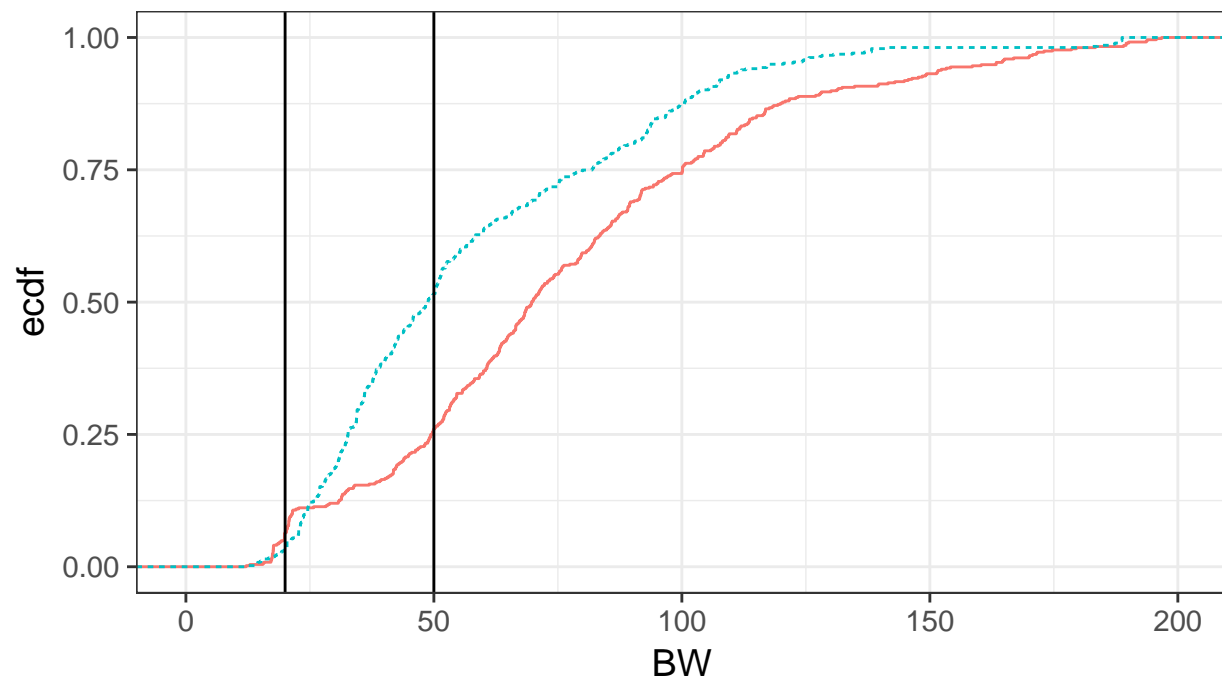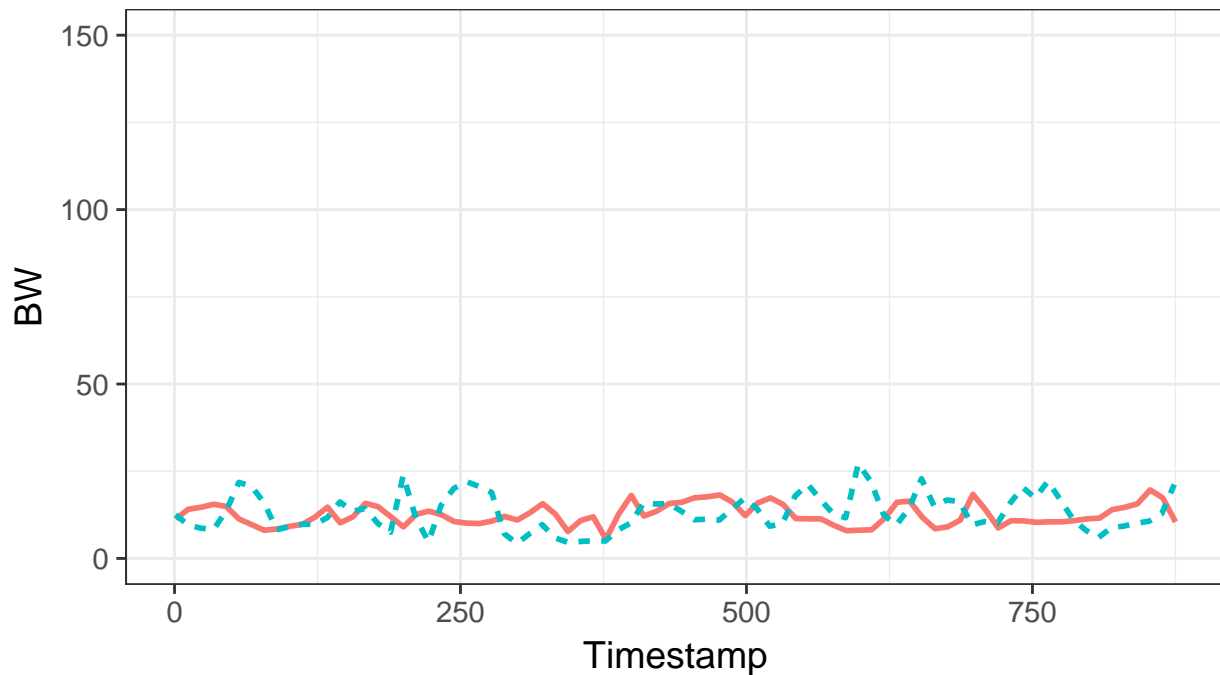## BSC 50 / 20 / Outside interference of 10 MB/s


```
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


```
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("../log47/log47.csv","URV 50 / 20 / Outside interference of 20 MB/s ",20,50)
draw1(dades)
```

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

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: Removed 1 rows containing non-finite values (stat_smooth).

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

Tenant ── Tenant 1 @ 50 MB/s ── Tenant 2 @ 20 MB/s


```
pdf(file="URV2-50_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 1 rows containing non-finite values (stat_smooth).
```
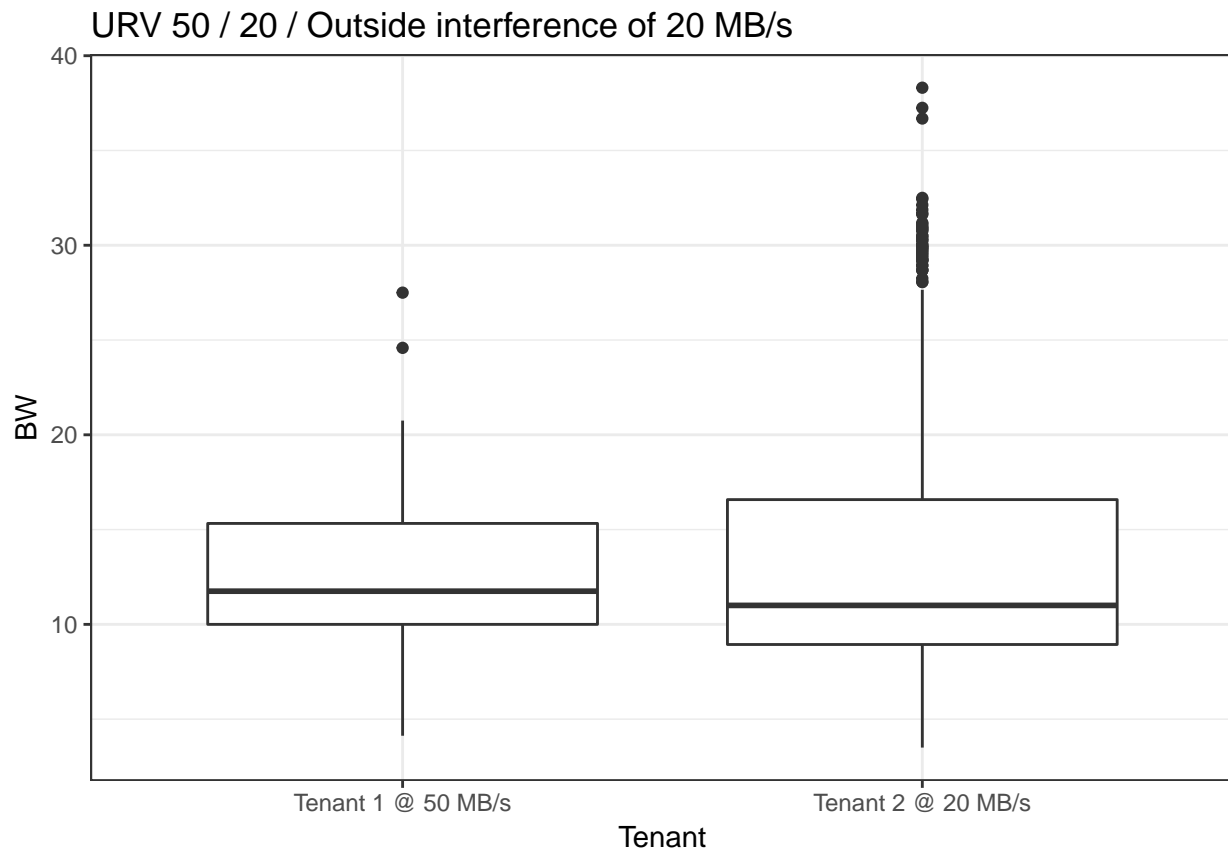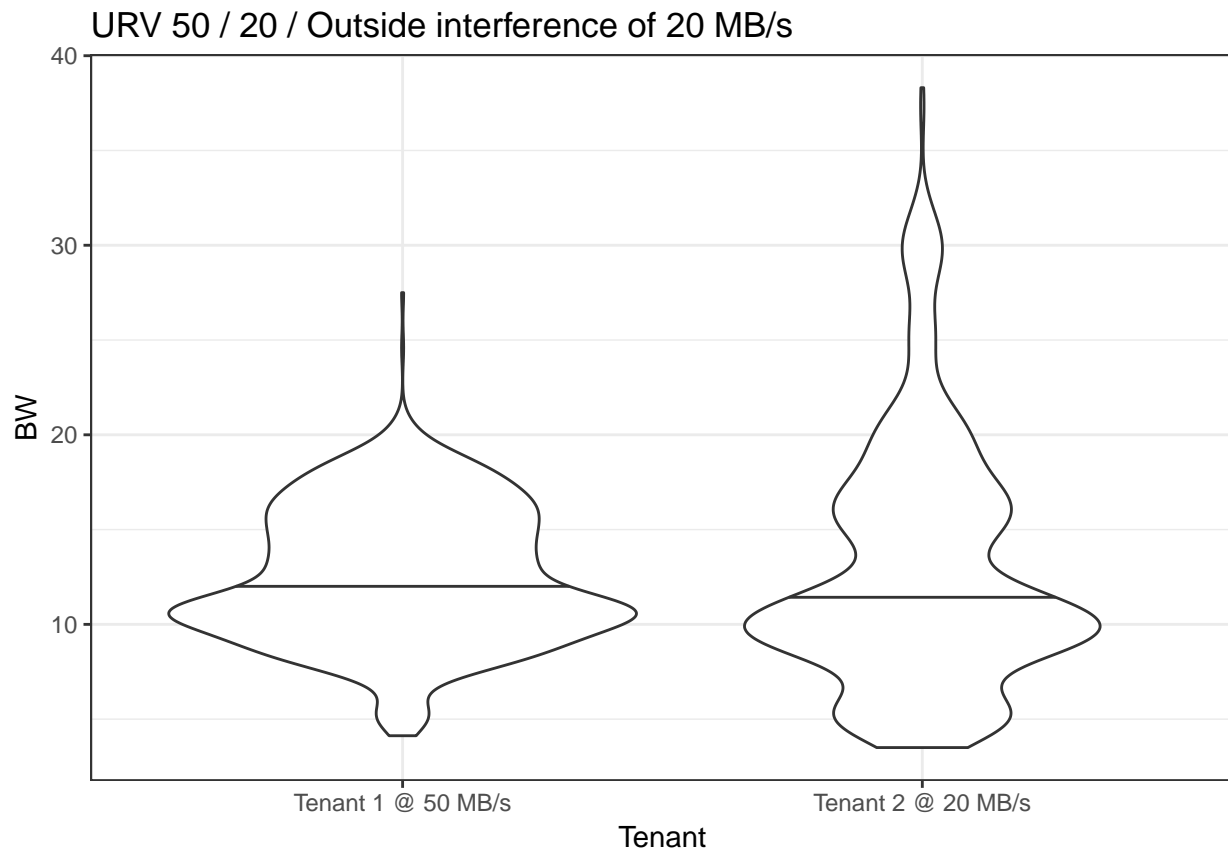
```
dev.off()
```

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

```
draw2(dades)
```

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

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

```
draw3(dades)
```

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

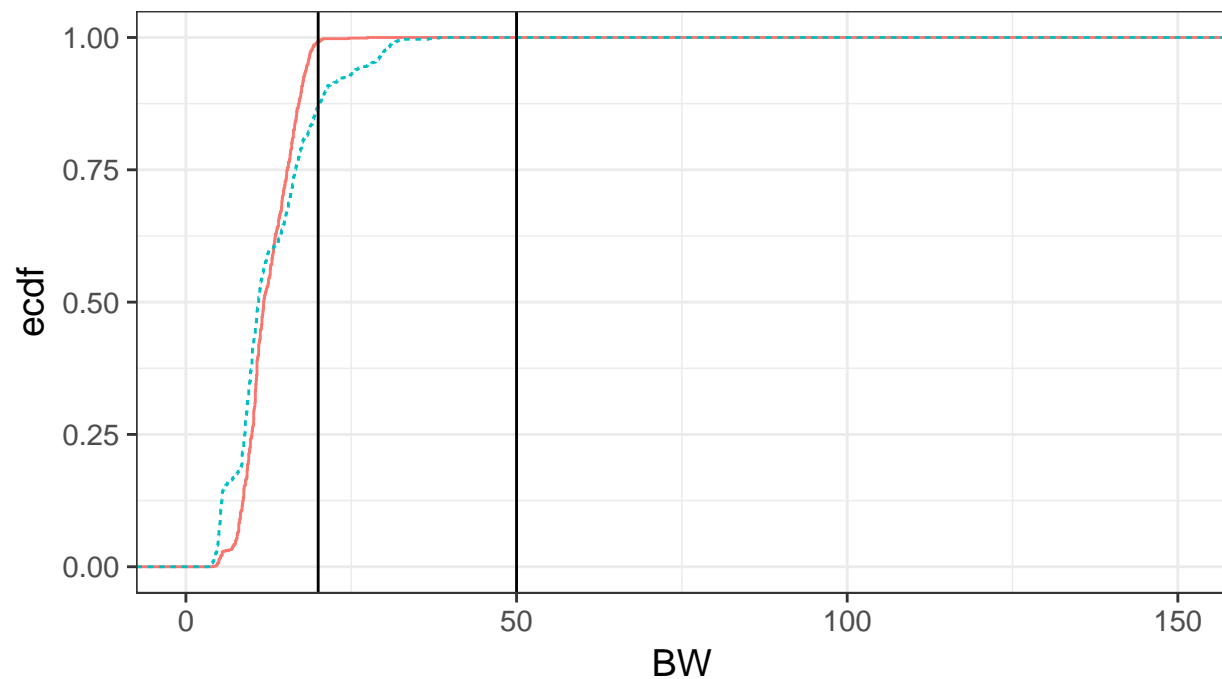URV 50 / 20 / Outside interference of 20 MB/s

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

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

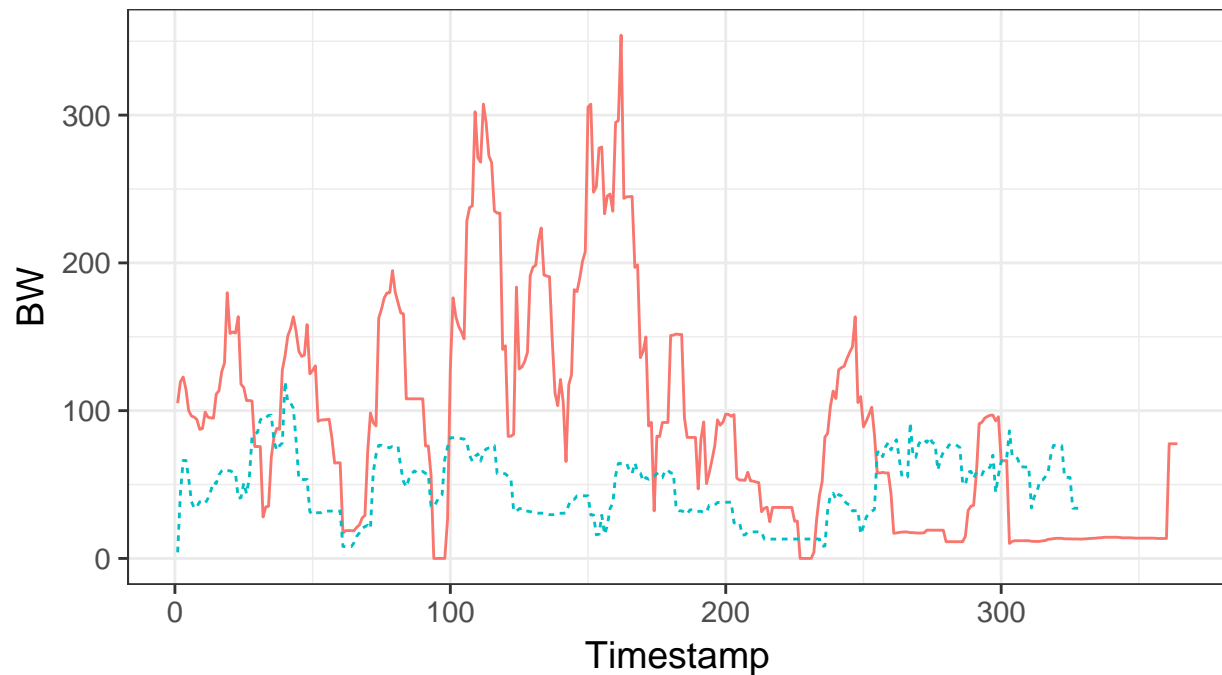# URV 50 / 20 / Outside interference of 20 MB/s


```
pdf(file="URV2-50_20_20i_ECDF.pdf",width = 7, height= 5)
draw4(dades)+scale_x_continuous(limits=c(0,150))
```

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

```
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).
```
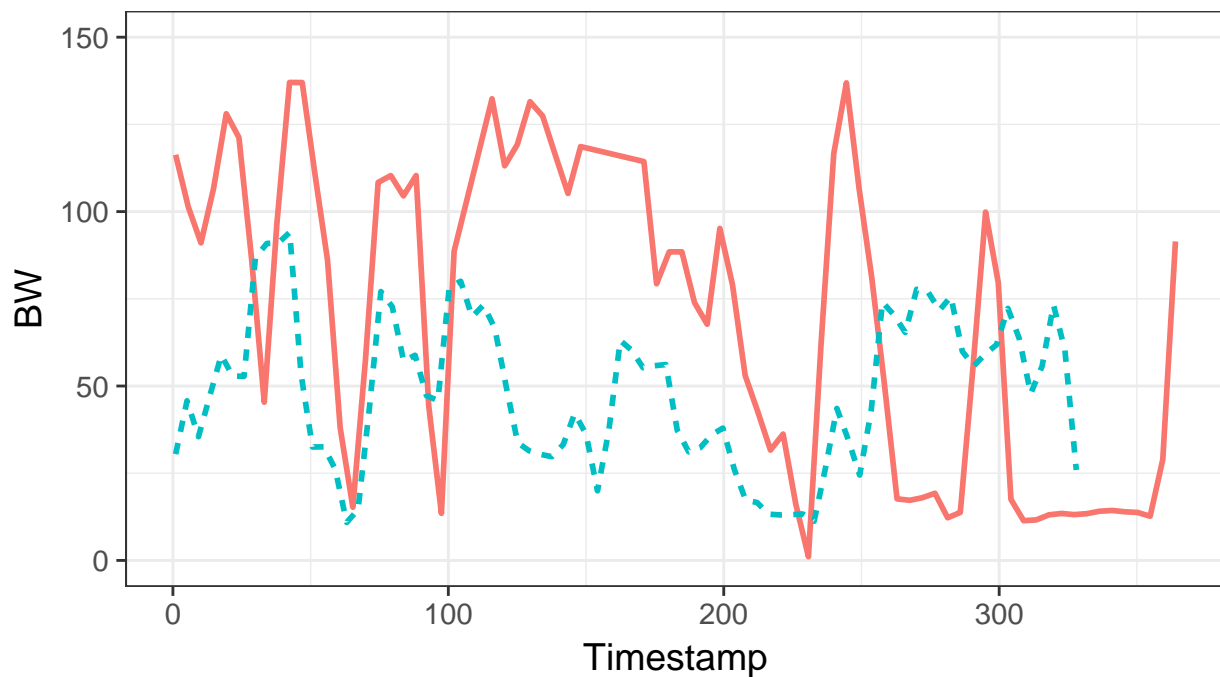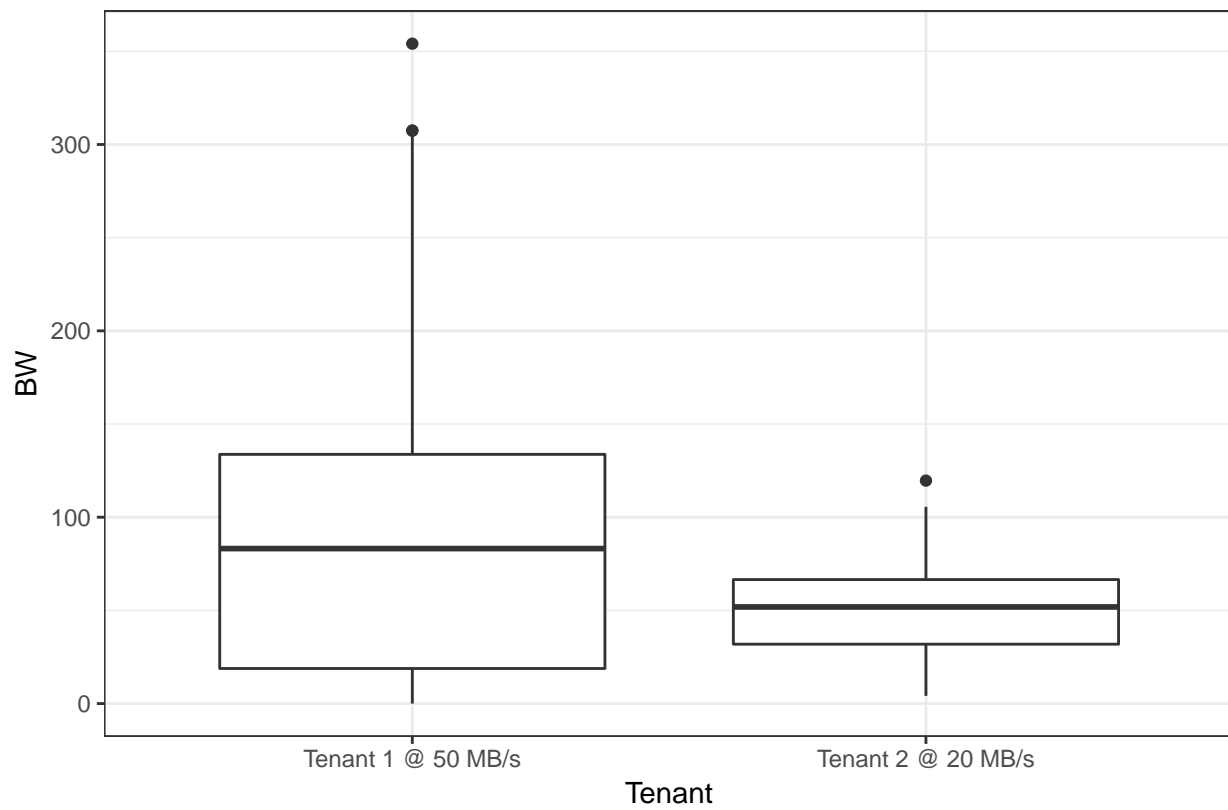
BSC 50 / 20 / Outside interference of 20 MB/s

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. ncmax= 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).
```
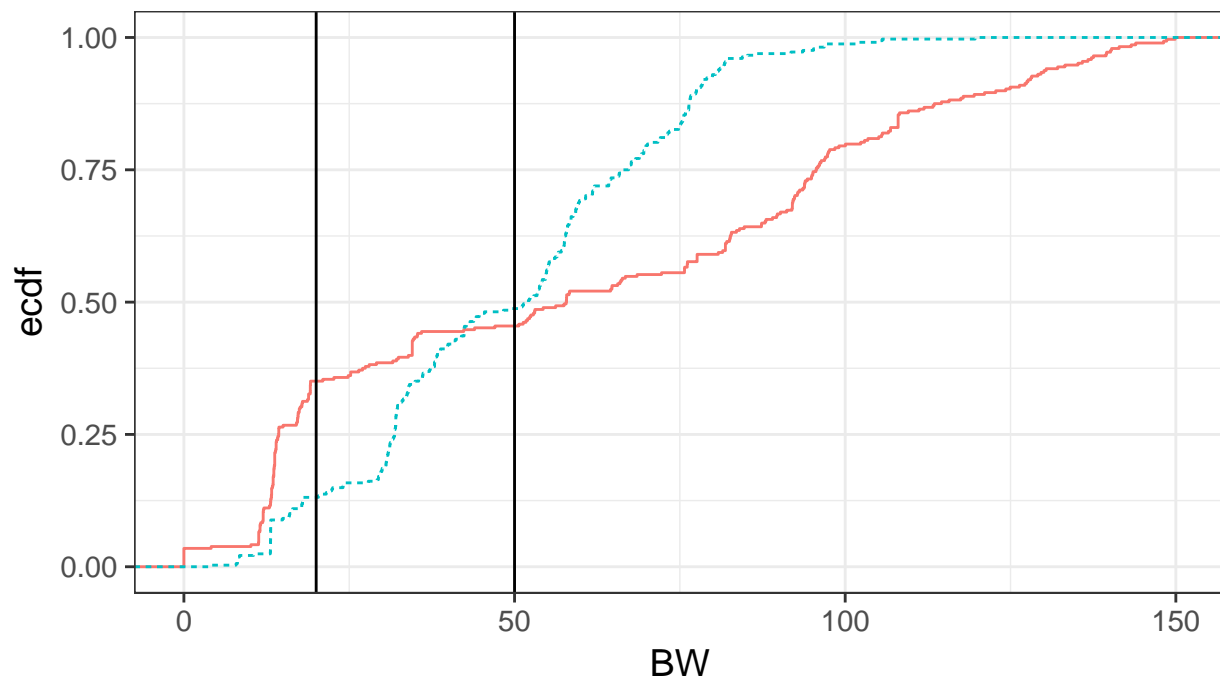
BSC 50 / 20 / Outside interference of 20 MB/s
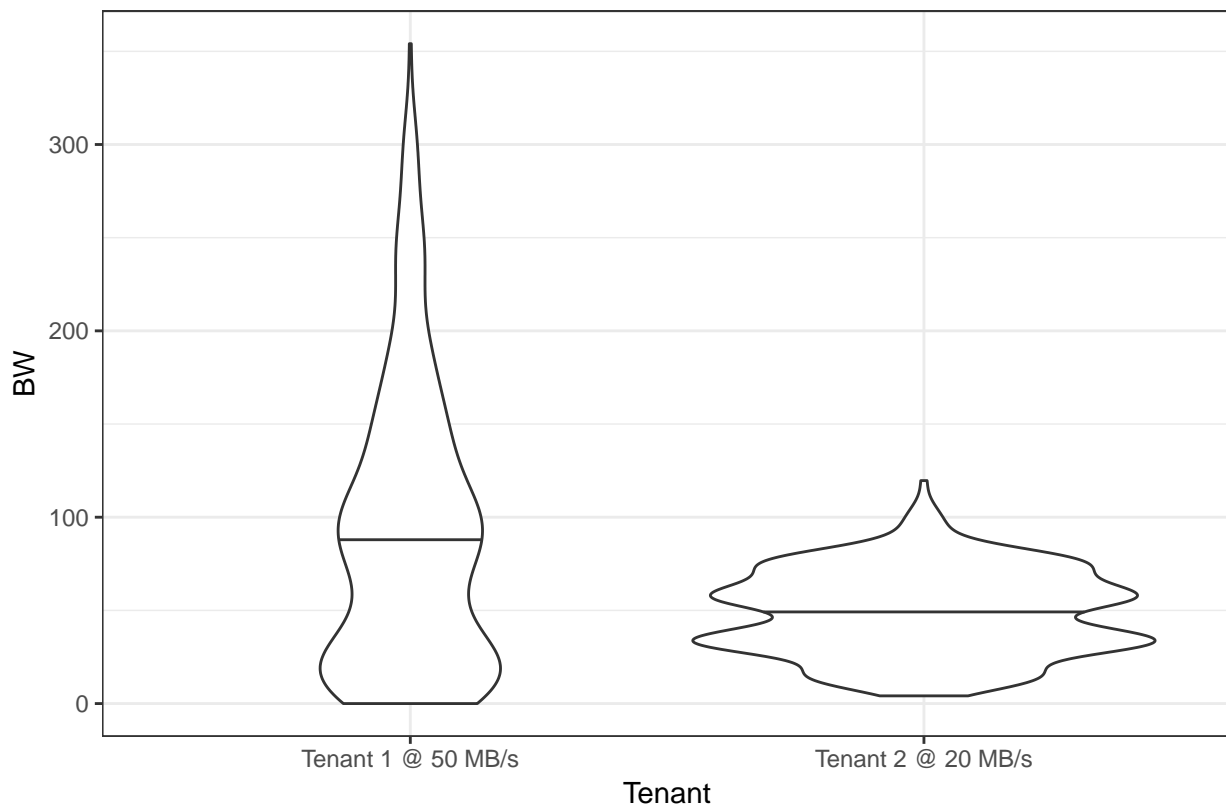

```
draw4(dades)+scale_x_continuous(limits=c(0,150))
```

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

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


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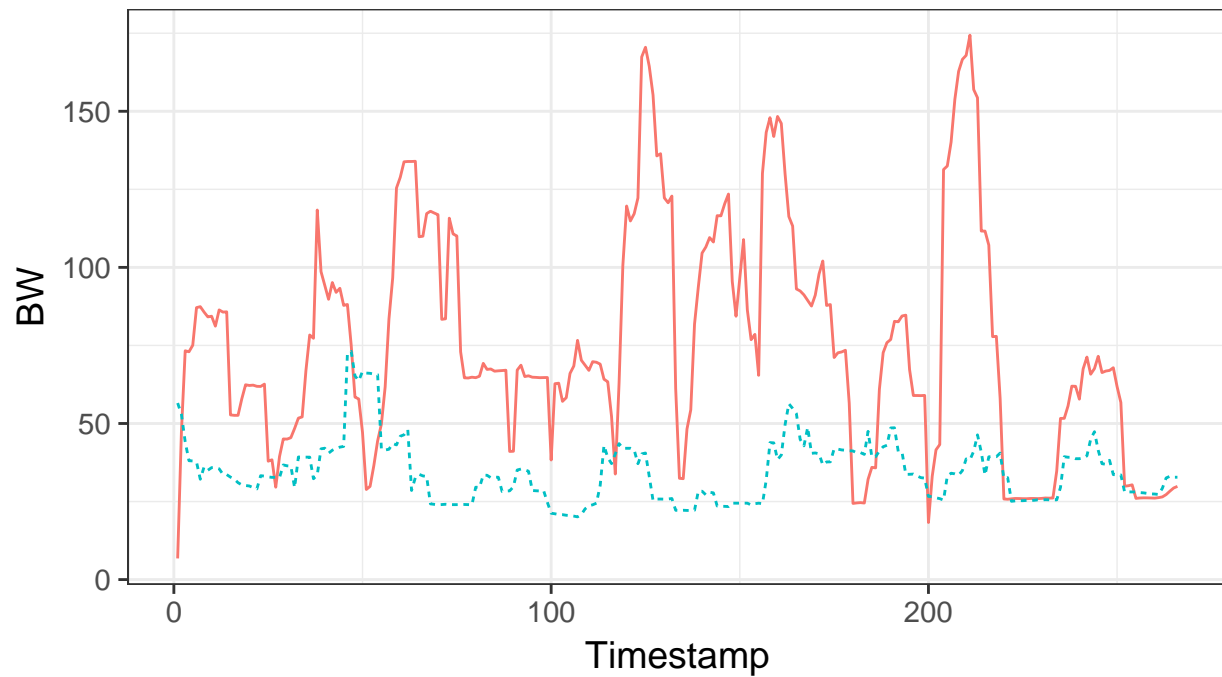
```
## Warning: Ignoring unknown parameters: degree

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

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 266

## Warning in simpleLoess(y, x, w, span, degree = degree, parametric =
## parametric, : k-d tree limited by memory. ncmax= 266
```
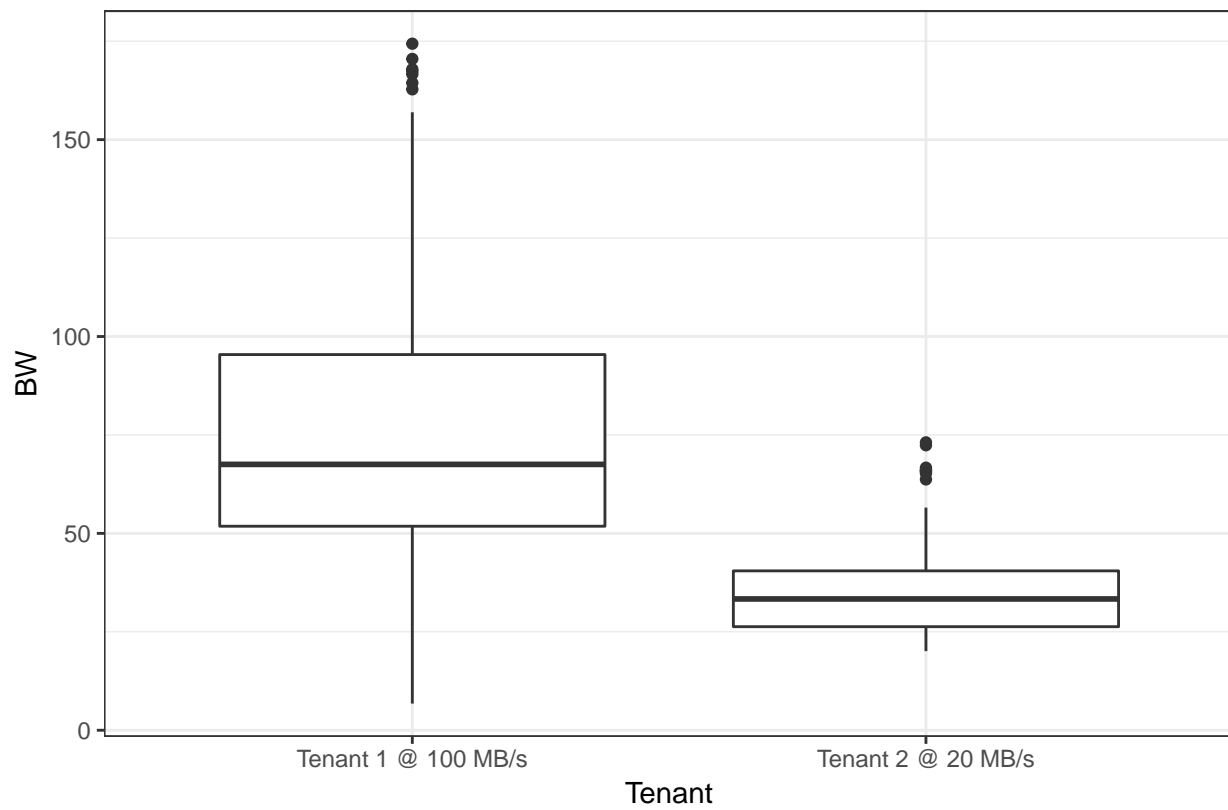
BSC 100 / 20 / Outside interference of 20 MB/s
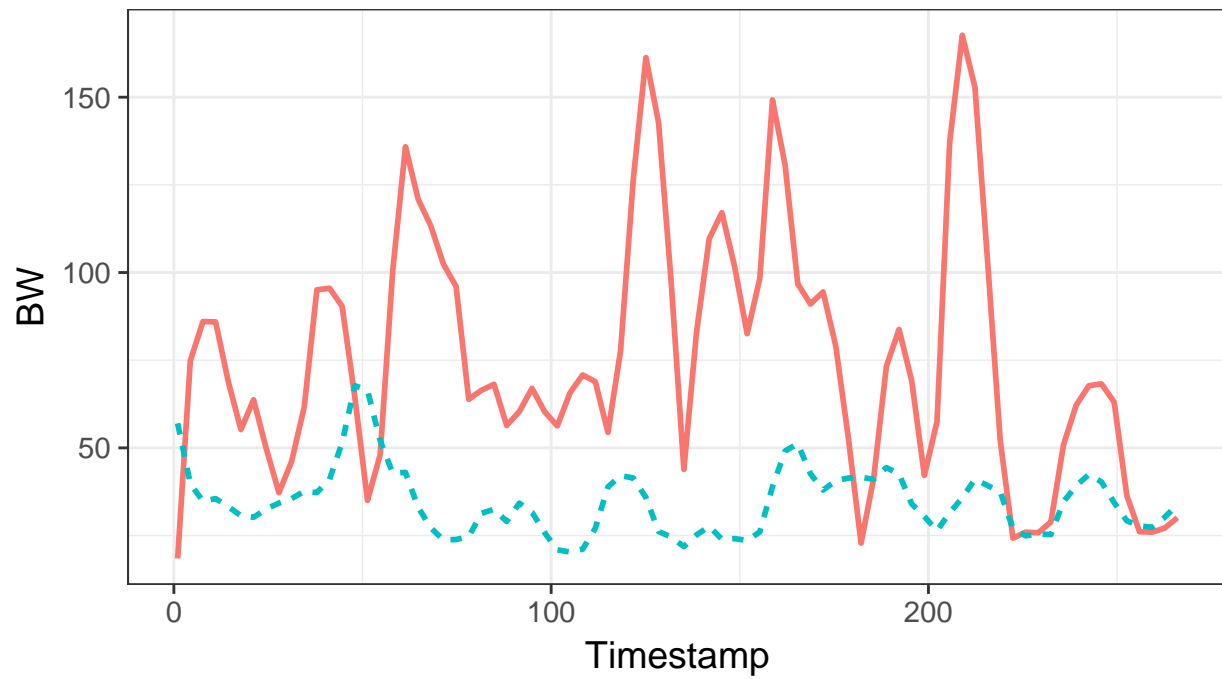
Tenant ⎯⎯ Tenant 1 @ 100 MB/s ⎯ ⎯ Tenant 2 @ 20 MB/s


```
draw2(dades)
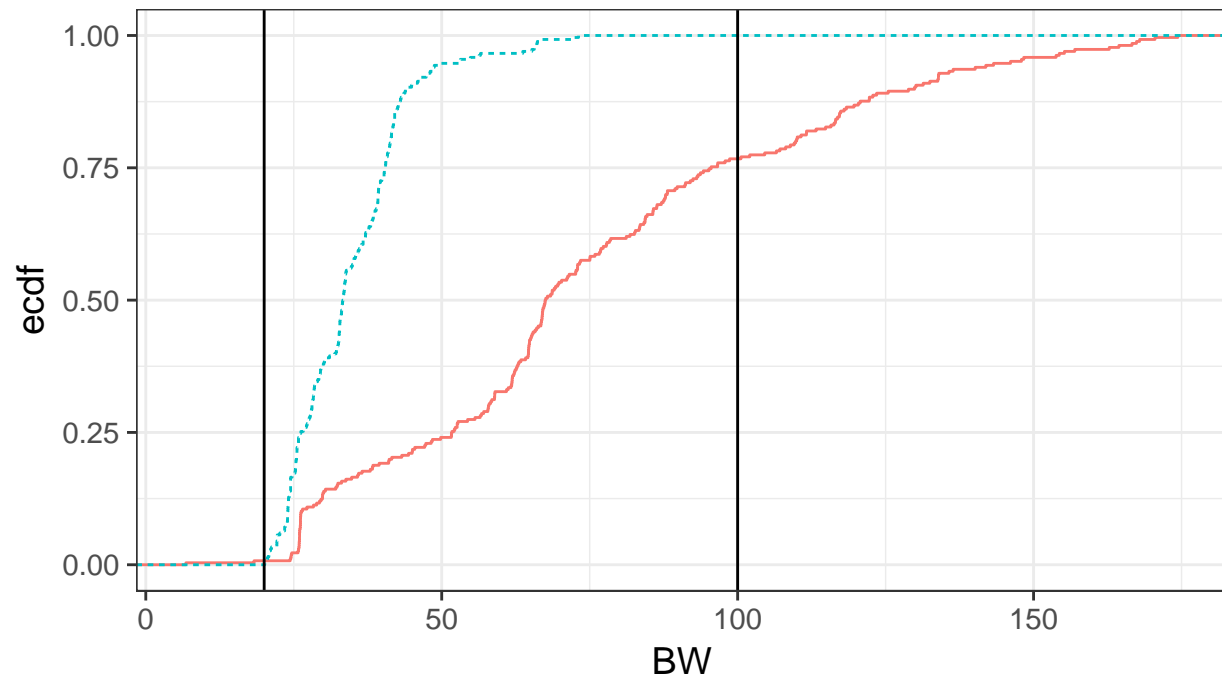```

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



```
draw3(dades)
```

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

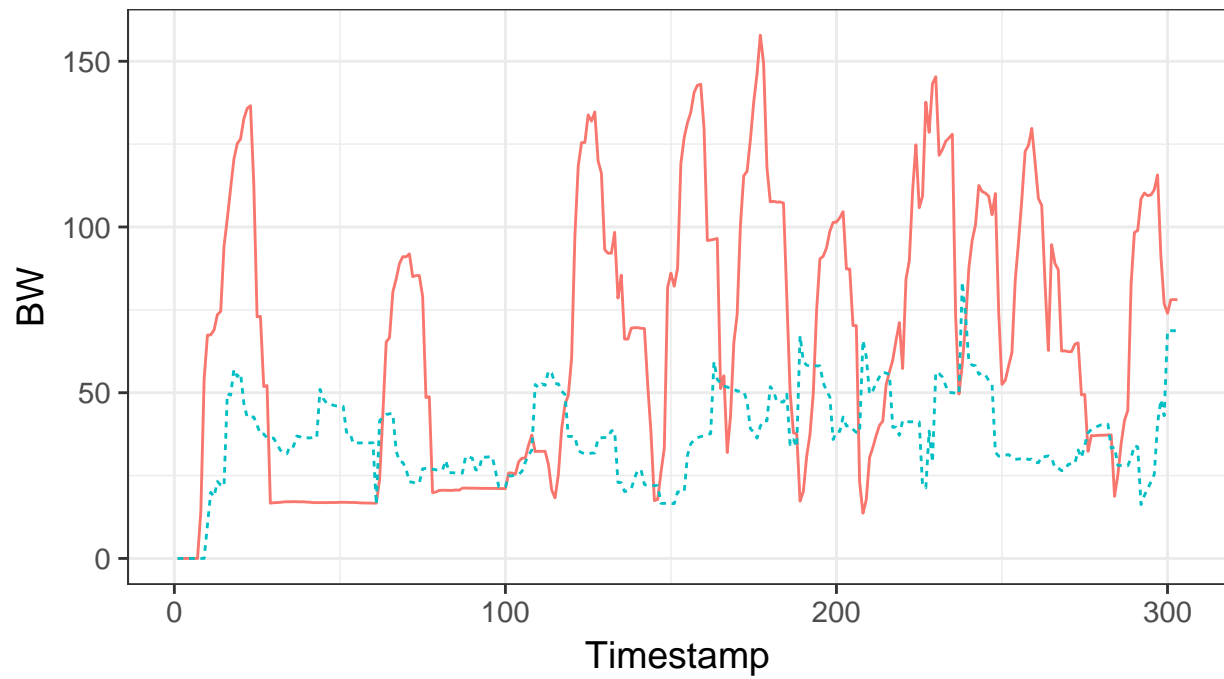```
draw4(dades)
```

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


```
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

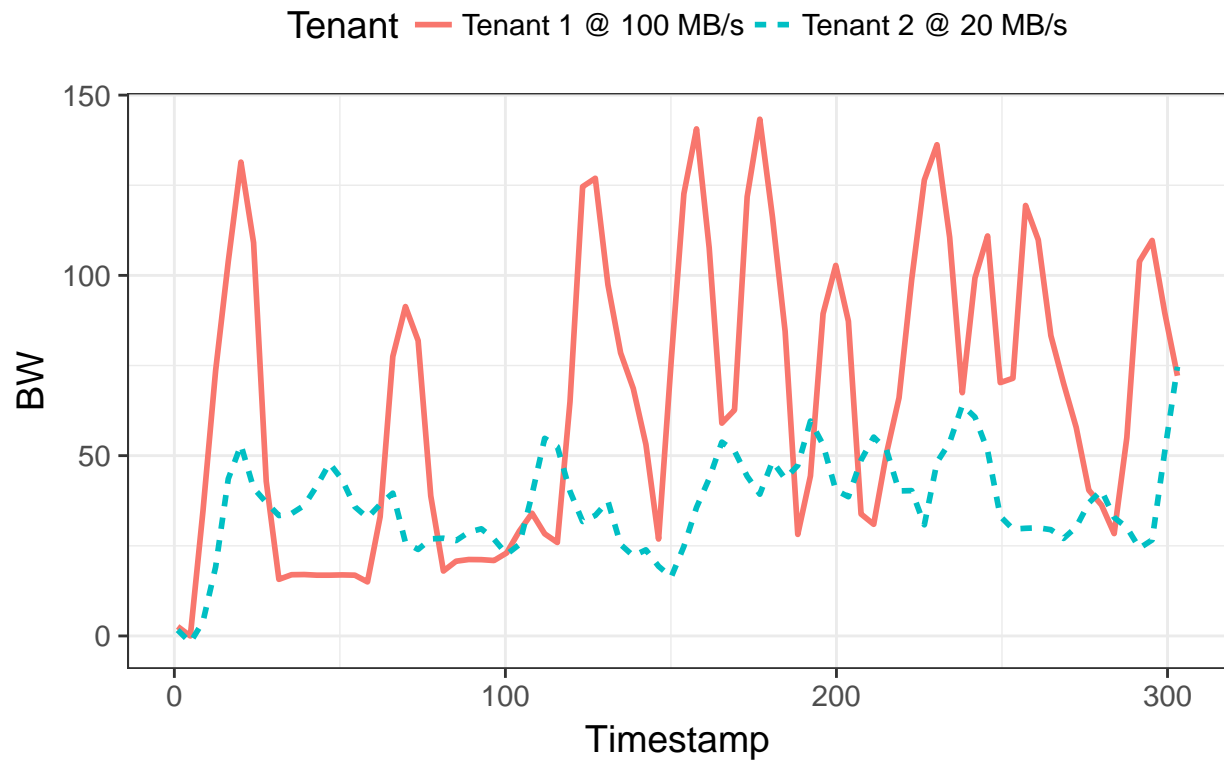Tenant ── Tenant 1 @ 100 MB/s ···· Tenant 2 @ 20 MB/s
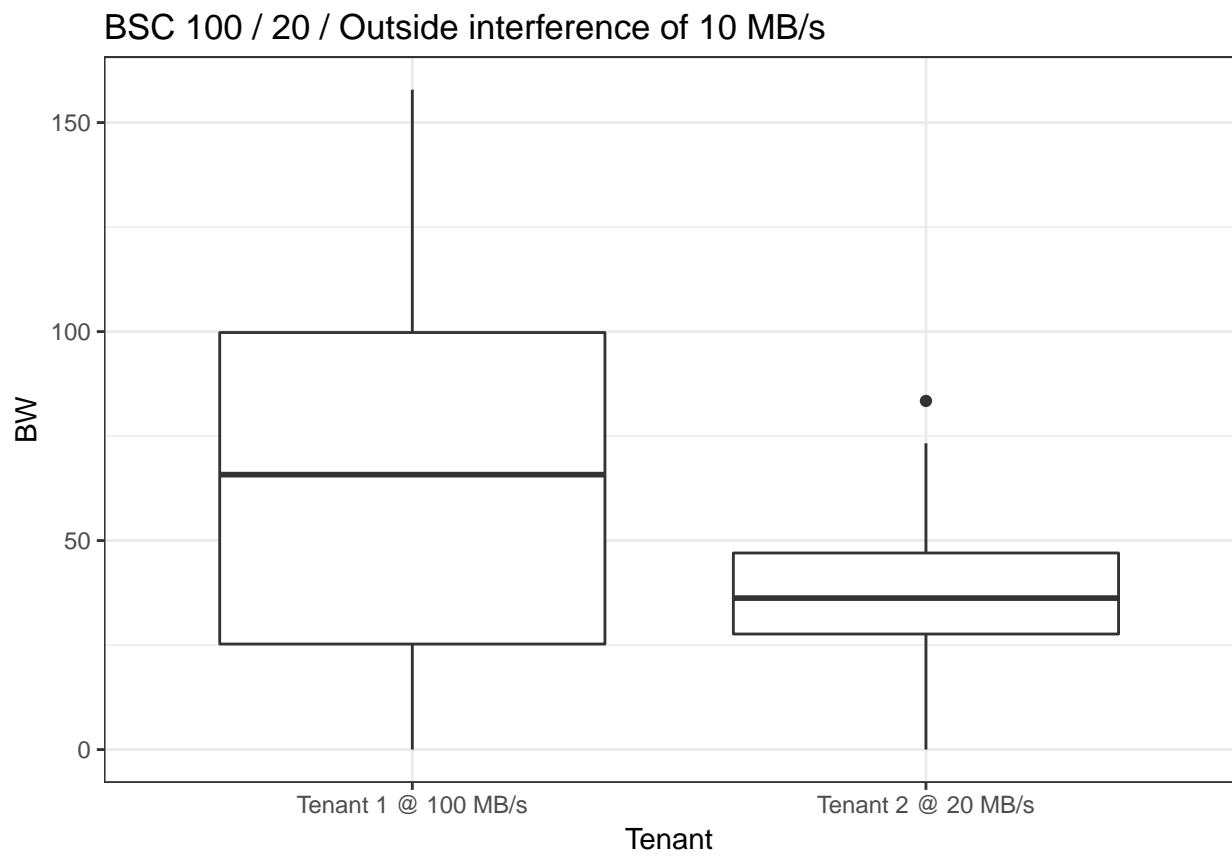


```
drawsmooth(dades)
```

Warning: Ignoring unknown parameters: degree

`geom_smooth()` using method = 'loess'
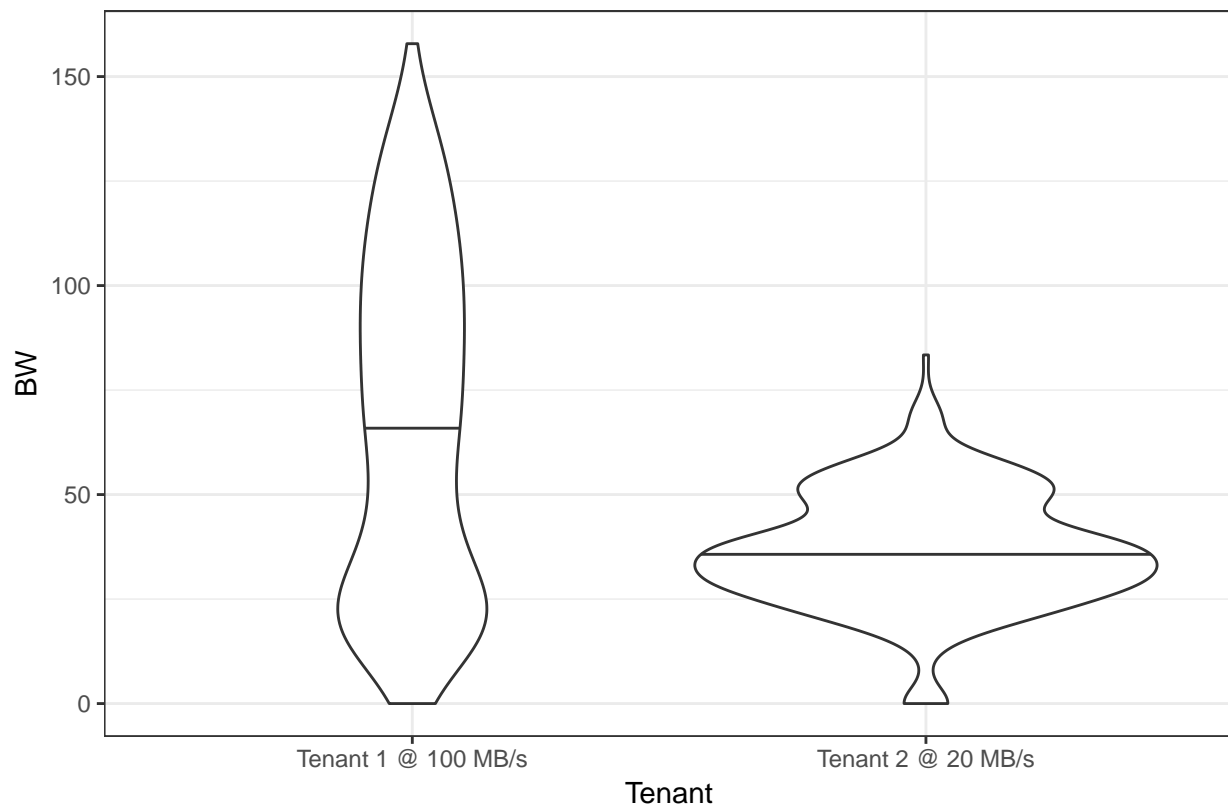
BSC 100 / 20 / Outside interference of 10 MB/s

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


```
draw2(dades)
```

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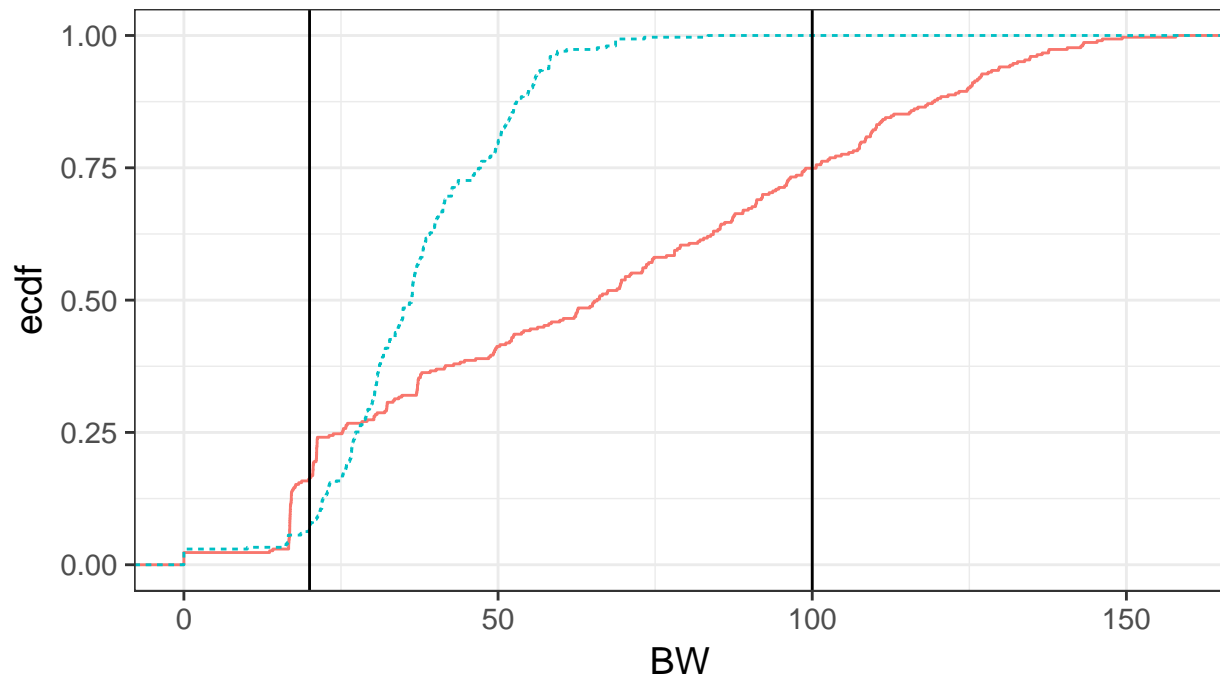


```
draw3(dades)
```

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


```
draw4(dades)
```
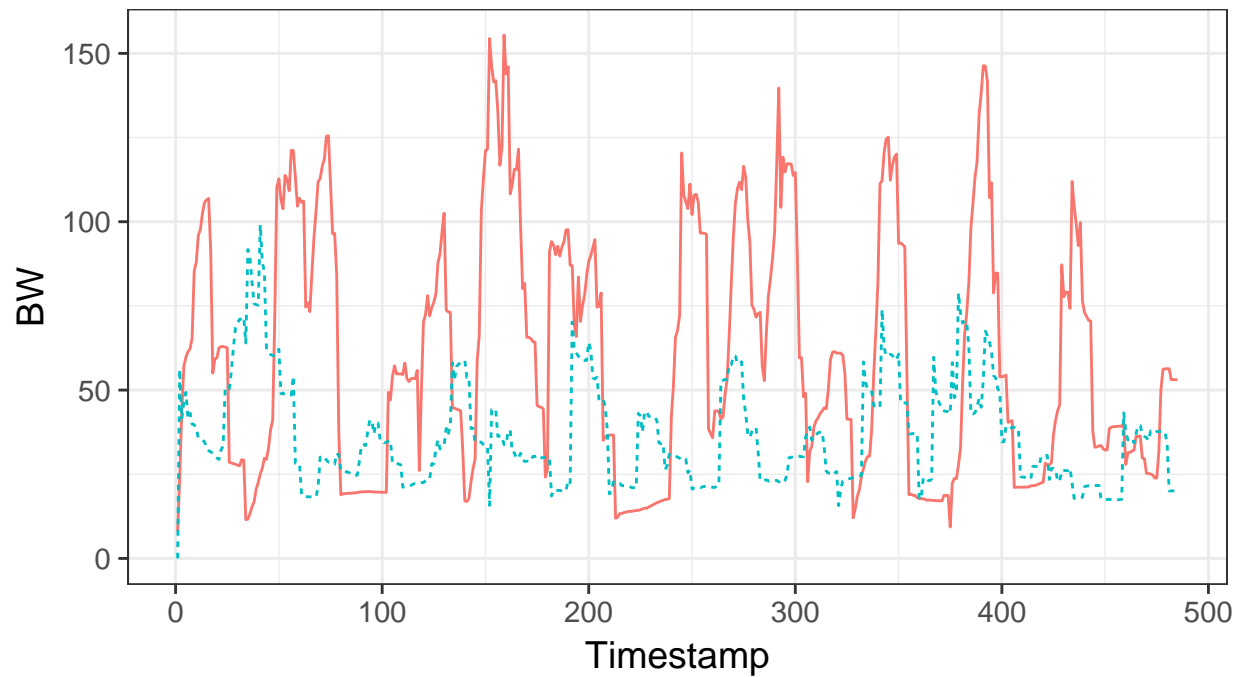
BSC 100 / 20 / Outside interference of 10 MB/s

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

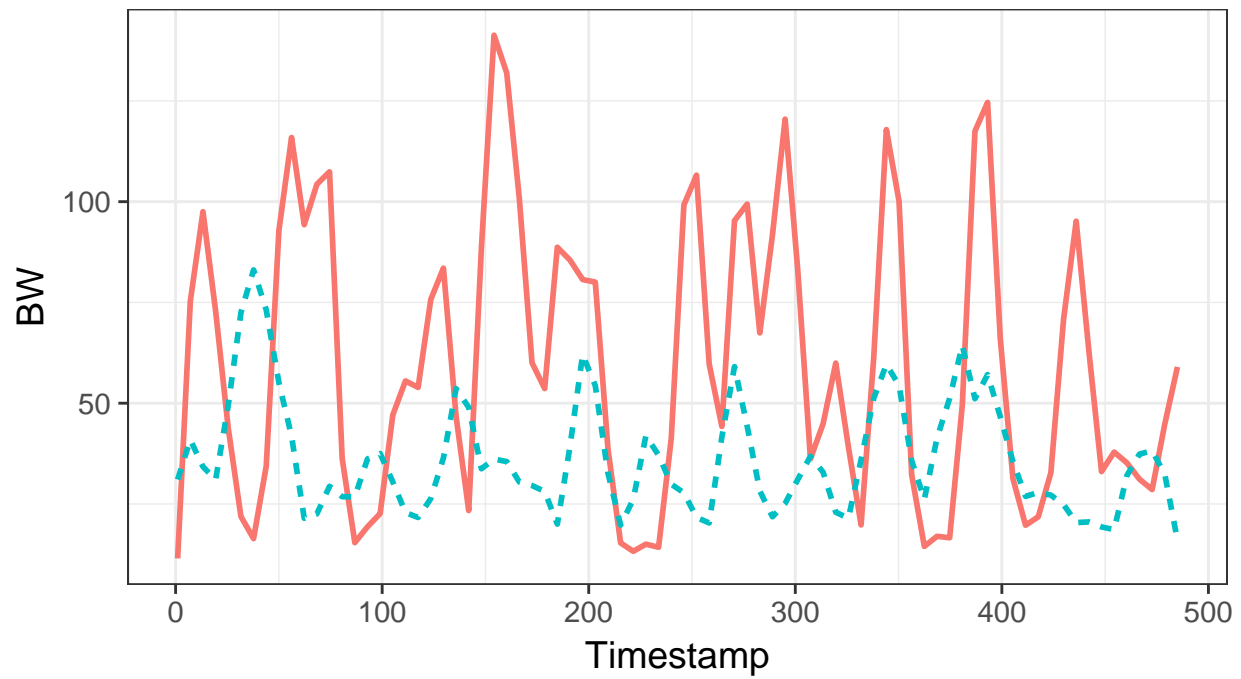Tenant ─── Tenant 1 @ 100 MB/s ┄┄┄ Tenant 2 @ 20 MB/s


```
drawsmooth(dades)
```

```
## Warning: Ignoring unknown parameters: degree
```
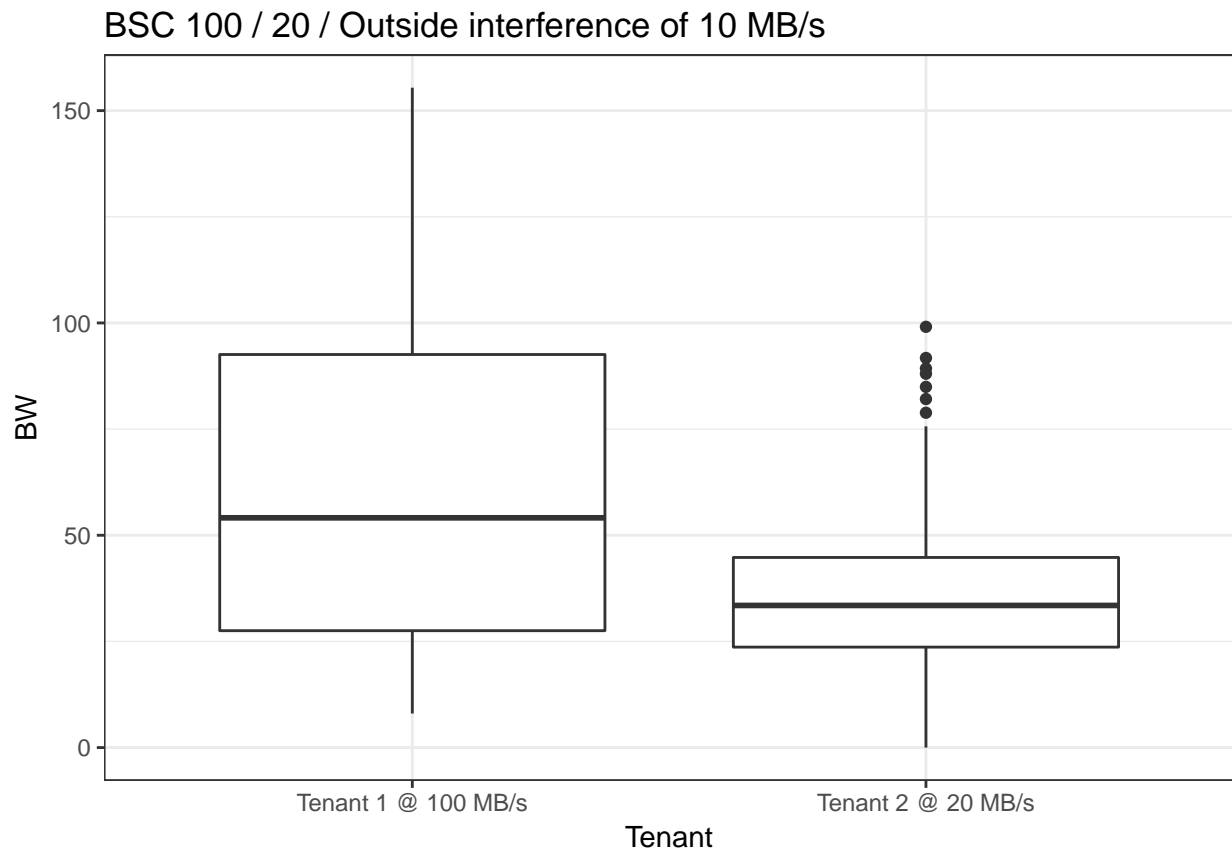
```
## `geom_smooth()` using method = 'loess'
```

BSC 100 / 20 / Outside interference of 10 MB/s
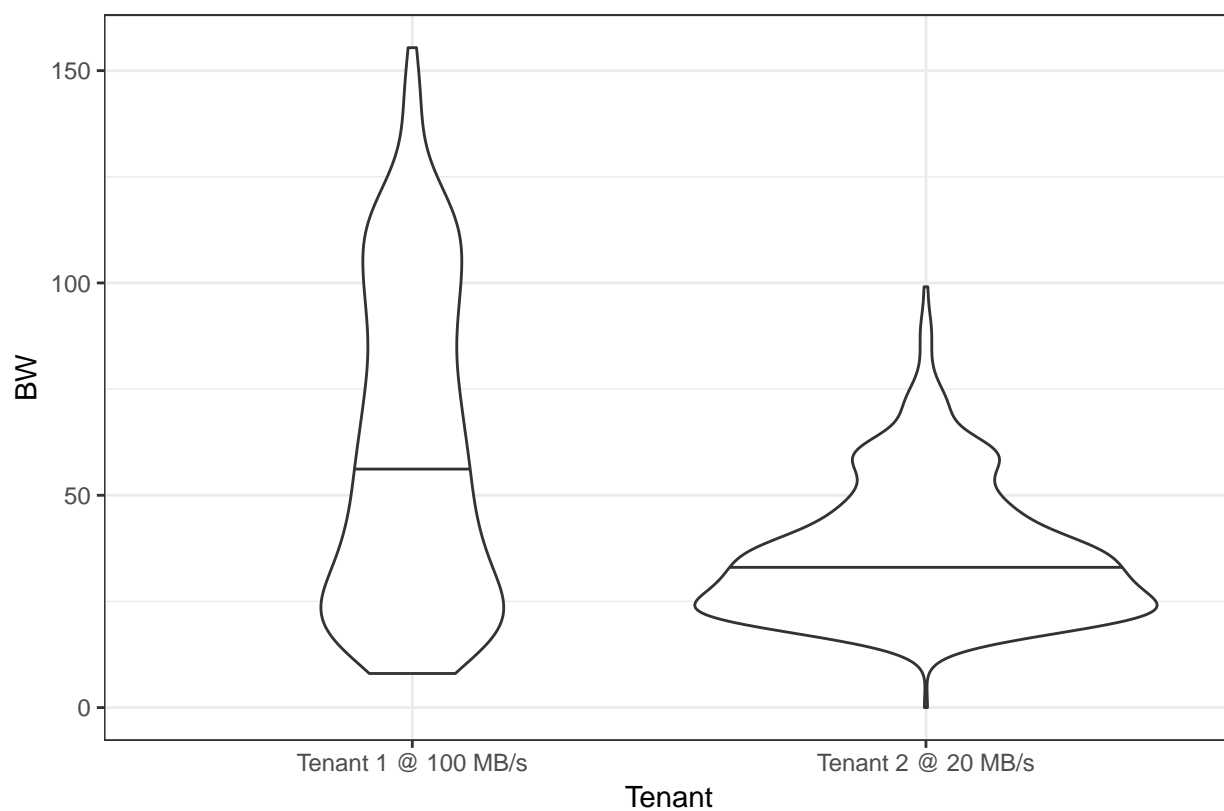
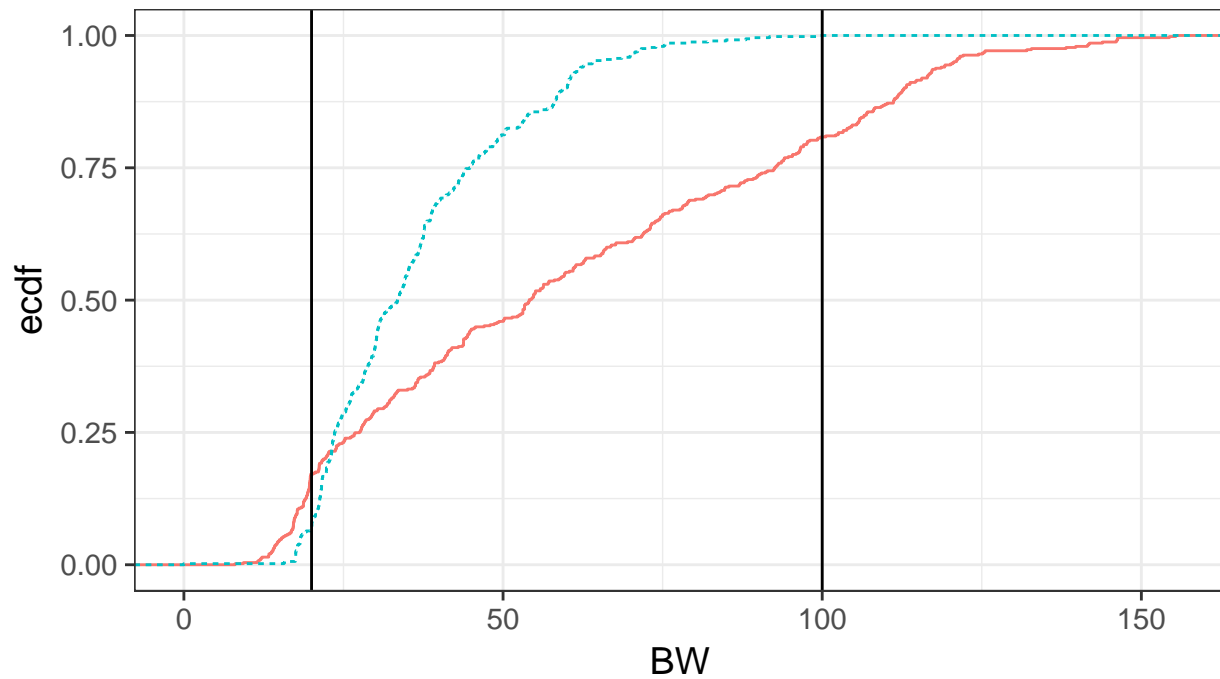Tenant ── Tenant 1 @ 100 MB/s ─ ─ Tenant 2 @ 20 MB/s


```
draw2(dades)
```

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


```
draw3(dades)
```
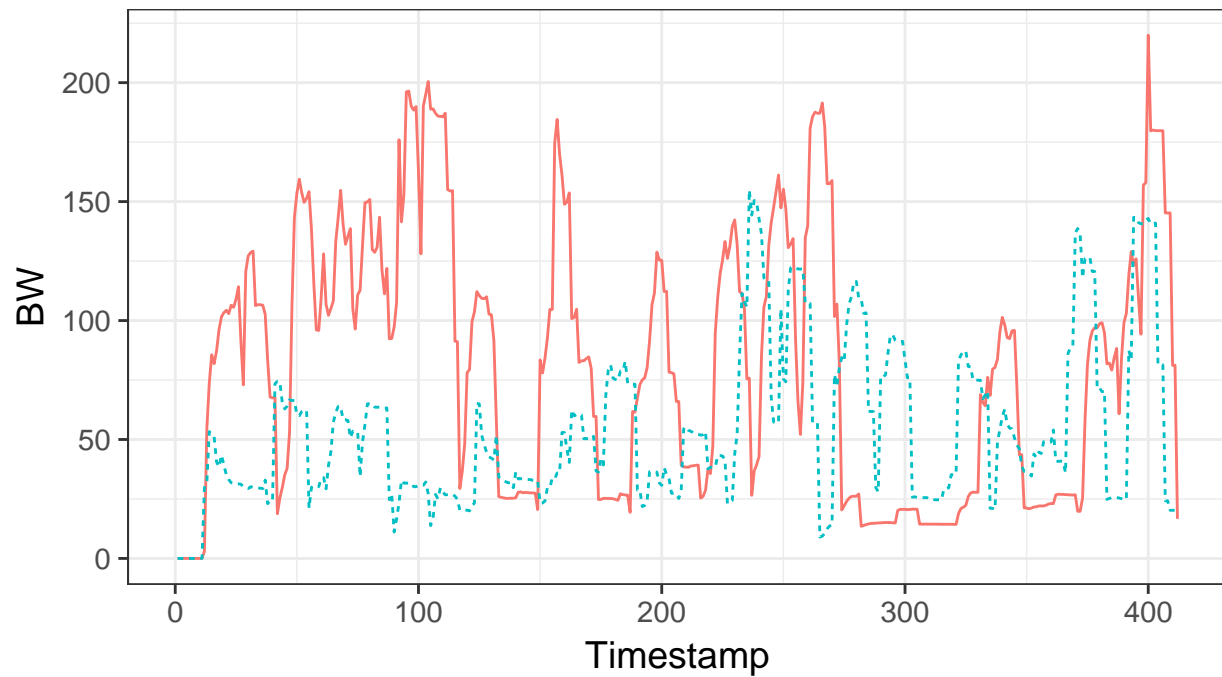
BSC 100 / 20 / Outside interference of 10 MB/s


```
draw4(dades)
```

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


```
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

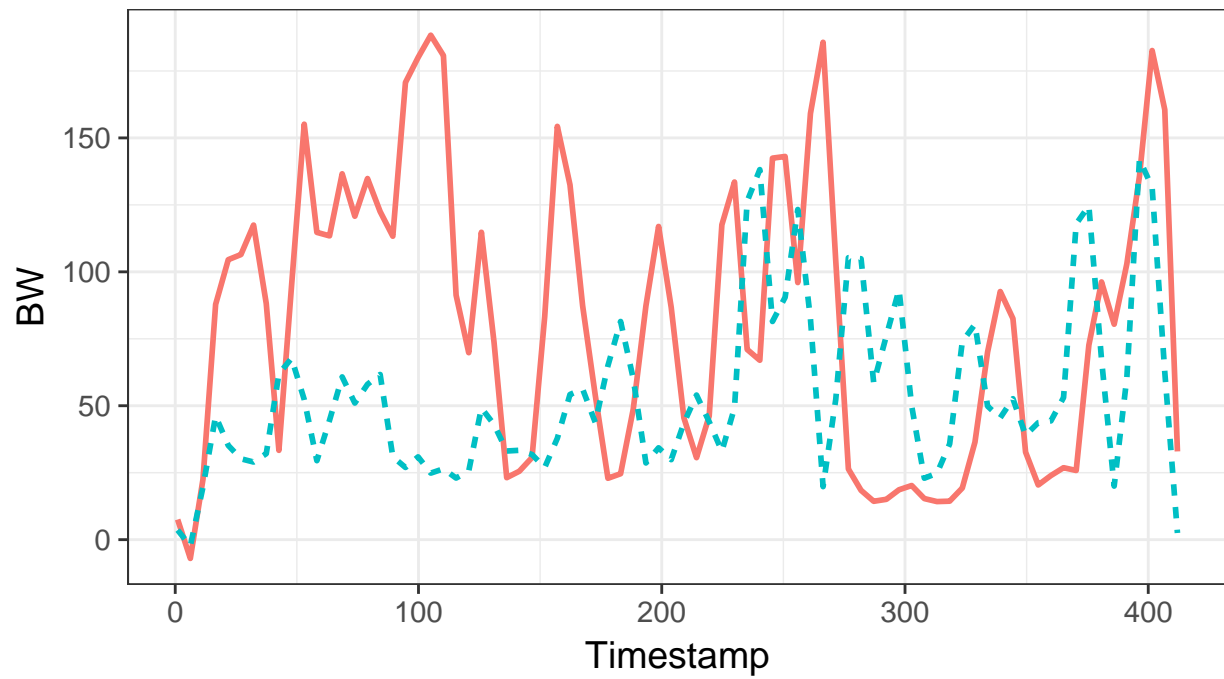Tenant —— Tenant 1 @ 100 MB/s ‑‑‑ Tenant 2 @ 20 MB/s


```
drawsmooth(dades)
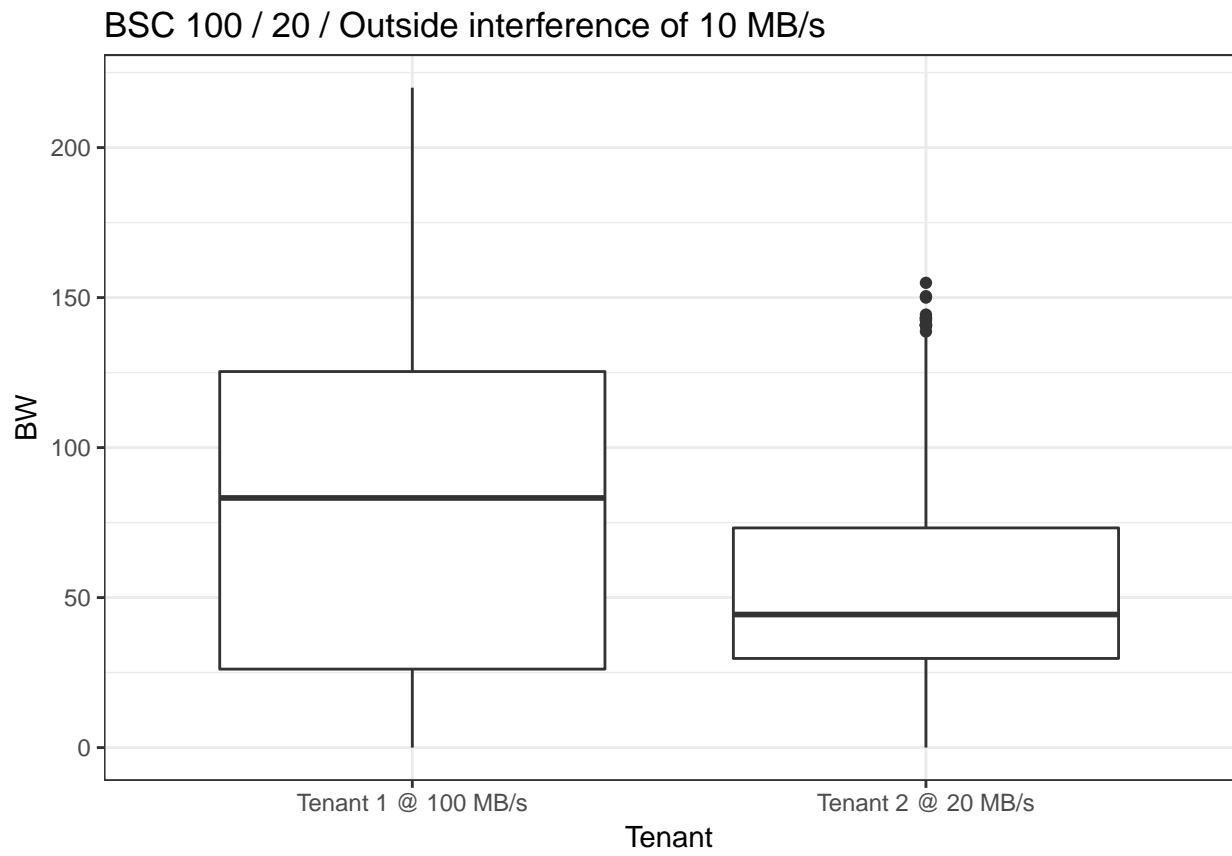```

```
## 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)
```

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