

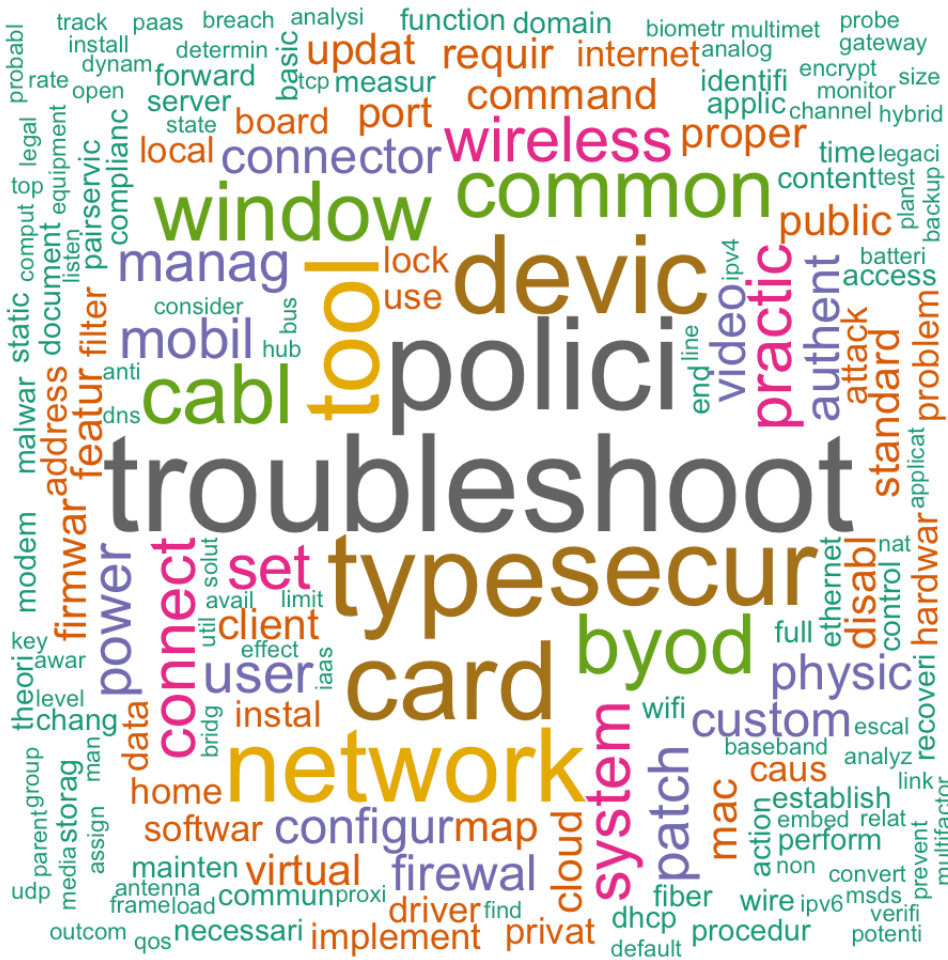
```
length(sd$word)
```

```
## [1] 266
```

A+ and Network+ Common Elements

```
and <- merge(ad, nd, by = "word")

set.seed(1234)
wordcloud(words = and$word, freq = and$freq.x, min.freq = 1,
          max.words=200, random.order=FALSE, rot.per=0.35,
          colors=brewer.pal(8, "Dark2"))
```



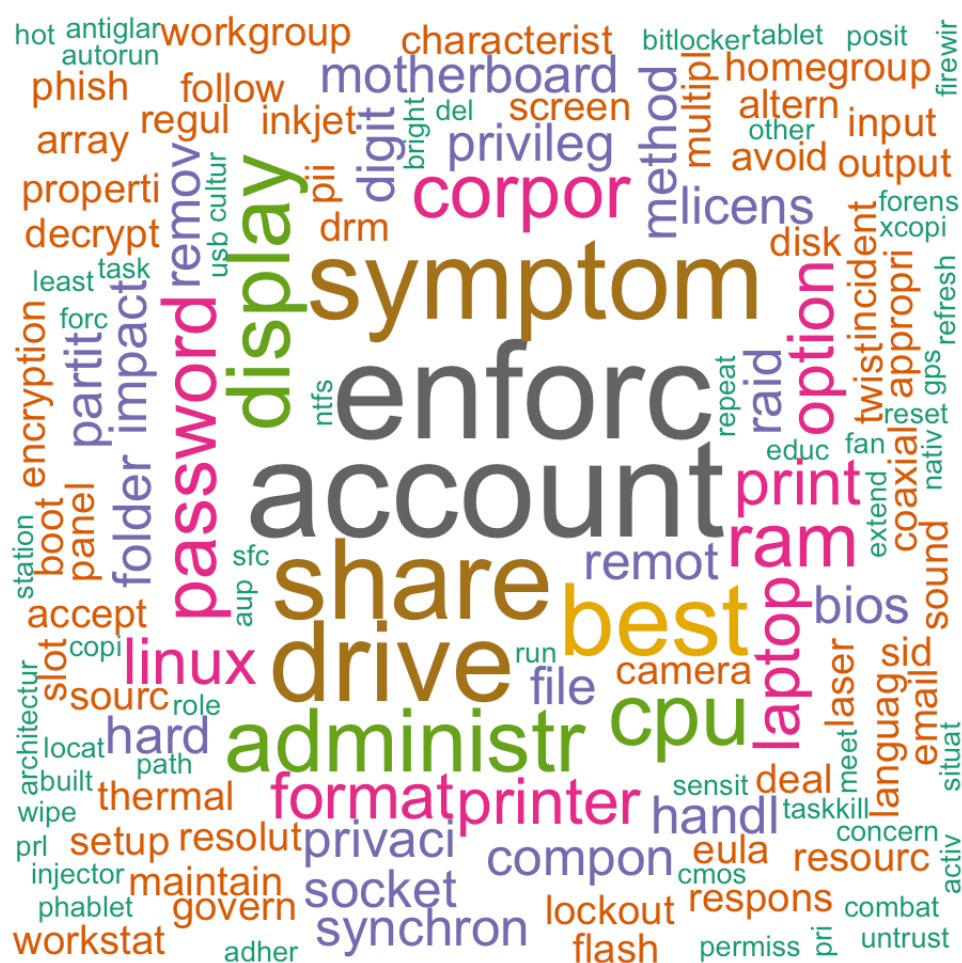
```
length(and$word)
```

```
## [1] 197
```

Terms in A+ but not in Network+


```
adonly <-ad[!(ad$word %in% nd$word),]

set.seed(1234)
wordcloud(words = adonly$word, freq = adonly$freq, min.freq = 1,
  max.words=200, random.order=FALSE, rot.per=0.35,
  colors=brewer.pal(8, "Dark2"))
```



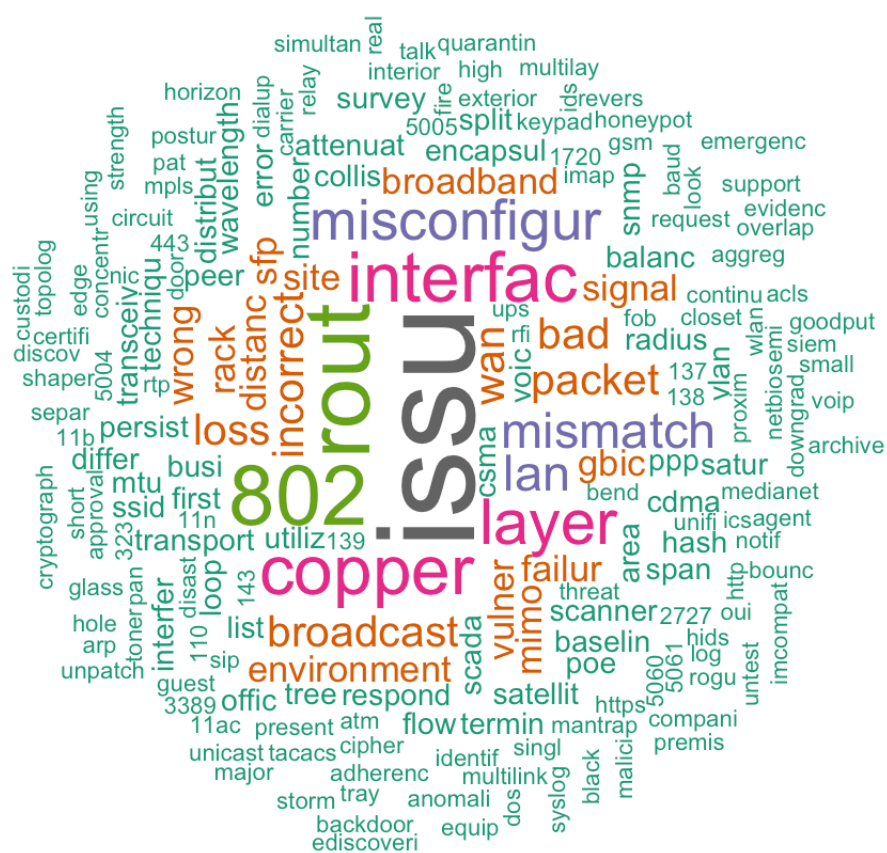
```
length(adonly$word)
```

```
## [1] 301
```

Terms in Network+ but not in A+

```
ndonly <-nd[!(nd$word %in% ad$word),]

set.seed(1234)
wordcloud(words = ndonly$word, freq = ndonly$freq, min.freq = 1,
  max.words=200, random.order=FALSE, rot.per=0.35,
  colors=brewer.pal(8, "Dark2"))
```

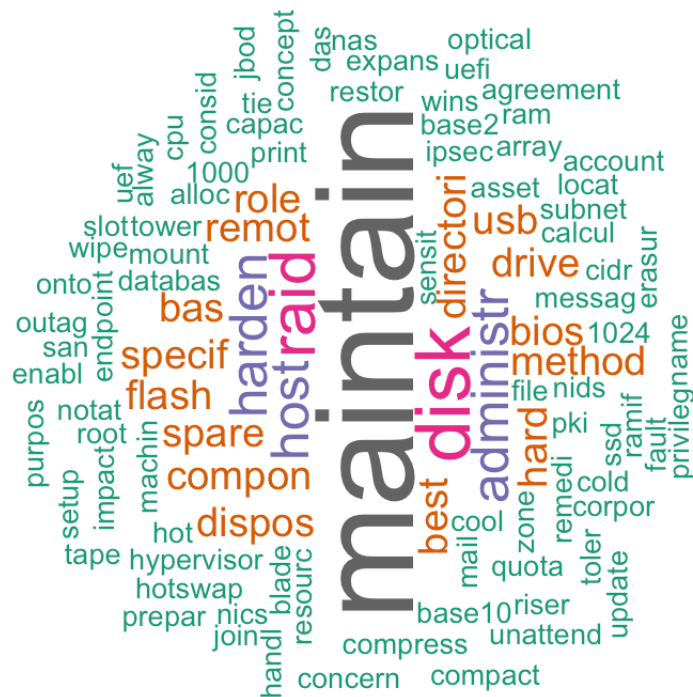



```
length(ndonly$word)
```

```
## [1] 331
```

Terms in Server+ but not in Network+

```
sdonly <-sd[!(sd$word %in% nd$word),]  
  
set.seed(1234)  
wordcloud(words = sdonly$word, freq = sdonly$freq, min.freq = 1,  
          max.words=200, random.order=FALSE, rot.per=0.35,  
          colors=brewer.pal(8, "Dark2"))
```



```
length(sdonly$word)
```

```
## [1] 103
```

Terms in All three exams

```
all <- merge (nd, merge(ad, sd, by = "word"), by = "word")  
  
set.seed(1234)  
wordcloud(words = all$word, freq = all$freq, min.freq = 1,  
          max.words=200, random.order=FALSE, rot.per=0.35,  
          colors=brewer.pal(8, "Dark2"))
```


## 42	function	2	2	2
## 43	gateway	3	1	1
## 44	hardwar	1	3	10
## 45	identifi	2	2	4
## 46	implement	8	3	5
## 47	instal	2	3	1
## 48	install	1	1	11
## 49	ipv4	1	1	1
## 50	ipv6	1	1	1
## 51	key	1	1	1
## 52	level	1	1	2
## 53	local	1	3	2
## 54	lock	1	3	1
## 55	mac	1	4	1
## 56	mainten	1	2	1
## 57	manag	14	6	6
## 58	measur	1	2	2
## 59	media	1	1	3
## 60	monitor	8	1	1
## 61	multifactor	1	1	1
## 62	nat	2	1	1
## 63	necessari	1	2	2
## 64	network	53	13	6
## 65	open	4	1	1
## 66	outcom	1	1	2
## 67	patch	2	6	1
## 68	perform	1	2	4
## 69	physic	9	5	9
## 70	placement	5	1	1
## 71	plan	2	1	3
## 72	polici	6	17	5
## 73	port	28	4	14
## 74	potenti	1	1	2
## 75	power	4	6	2
## 76	practic	2	7	2
## 77	prevent	1	1	2
## 78	privat	3	3	1
## 79	probabl	1	1	2
## 80	problem	2	3	13
## 81	procedur	3	2	1
## 82	public	3	4	1
## 83	resolv	1	1	2
## 84	router	3	1	1
## 85	safeti	2	1	1
## 86	secur	22	14	16
## 87	server	1	2	31
## 88	servic	4	2	3
## 89	size	1	1	1
## 90	softwar	2	3	4
## 91	solut	1	1	2
## 92	static	1	2	1
## 93	storag	1	2	8
## 94	system	6	7	2
## 95	tcp	3	1	1
## 96	technolog	1	1	1
## 97	test	5	1	2
## 98	theori	2	2	4
## 99	tool	7	13	4
## 100	troubleshoot	9	18	18
## 101	type	9	15	4
## 102	udp	1	1	1
## 103	user	3	6	1
## 104	verifi	1	1	2
## 105	video	2	5	1
## 106	virtual	1	4	1
## 107	vpn	2	1	1
## 108	wireless	25	7	1