

Untitled5

October 12, 2022

```
[1]: import glob
files = glob.glob("exported-flows/*.csv")
print(files)
```

```
['exported-flows/ft-v05.2016-05-26.210712+0200.csv', 'exported-
flows/ft-v05.2016-05-26.161912+0200.csv', 'exported-
flows/ft-v05.2016-05-26.230225+0200.csv', 'exported-
flows/ft-v05.2016-05-26.200936+0200.csv', 'exported-
flows/ft-v05.2016-05-26.191201+0200.csv', 'exported-
flows/ft-v05.2016-05-26.152136+0200.csv', 'exported-
flows/ft-v05.2016-05-26.220448+0200.csv', 'exported-
flows/ft-v05.2016-05-26.181424+0200.csv', 'exported-
flows/ft-v05.2016-05-26.171648+0200.csv', 'exported-
flows/ft-v05.2016-05-26.142400+0200.csv']
```

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[17]: total_amount_of_entries = 0
total_amount_of_packets = 0
source_ips = set([])
dest_ips = set([])
list_of_protocols = []
list_of_ports = []
port_dest_ips = dict()

import networkx as nx
G = nx.Graph()

import csv
for exported_flow in files:
    with open(exported_flow, "r") as f:
        data = csv.reader(f, delimiter=",")
        next(data)
        for line in data:
            total_amount_of_entries += 1
            total_amount_of_packets += int(line[4])

            source_ip = line[10]
            dest_ip = line[11]
            if source_ip not in source_ips:
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        source_ips.add(source_ip)
    if dest_ip not in dest_ips:
        dest_ips.add(dest_ip)

    protocol = int(line[17])
    list_of_protocols.append(protocol)

    if protocol == 6 or protocol == 17:
        G.add_edge(source_ip, dest_ip)
        port = int(line[16])
        list_of_ports.append(port)
        if port in port_dest_ips:
            port_dest_ips[port].append(dest_ip)
        else:
            port_dest_ips[port] = [dest_ip]

print(total_amount_of_entries)
print(total_amount_of_packets)
print(len(source_ips))

```

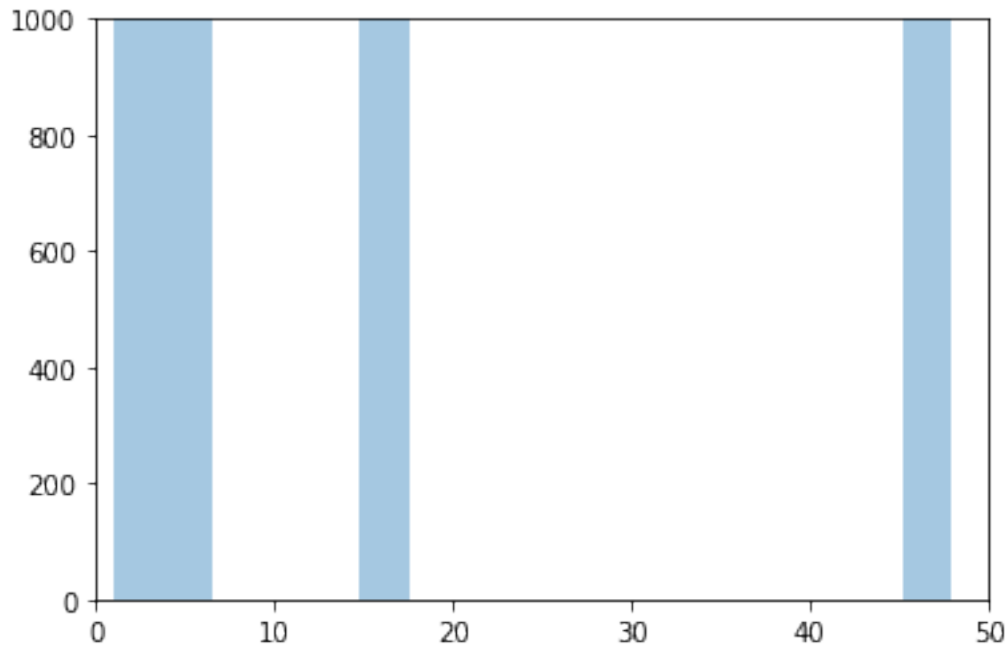
1073961
33345756
7918

```

[8]: import seaborn as sns
import matplotlib.pyplot as plt
plt.xlim((0, 1024))
plt.ylim(0, 1000)
sns.distplot(list_of_protocols, kde=False)

```

[8]: <AxesSubplot:>



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[19]: from collections import Counter
a = Counter(list_of_ports)
a.most_common(10)
a[54]
```

[19]: 7

```
[28]: # filtrovani portu
filtered_ports = [port for port in list_of_ports if port < 1024]

filtered_ports = []
for port in list_of_ports:
    if port < 1024:
        filtered_ports.append(port)
```

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[29]: tmp = set(port_dest_ips[54])
len(tmp)
```

[29]: 2

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[30]: for port in set(filtered_ports):
    tmp = set(port_dest_ips[port])
    if (len(tmp) > 10 and a[port] > 200):
        # do (6)
        print(port)
```

53
80
123
137
138
161
443
445
993

[]: