

## Sample Inputs

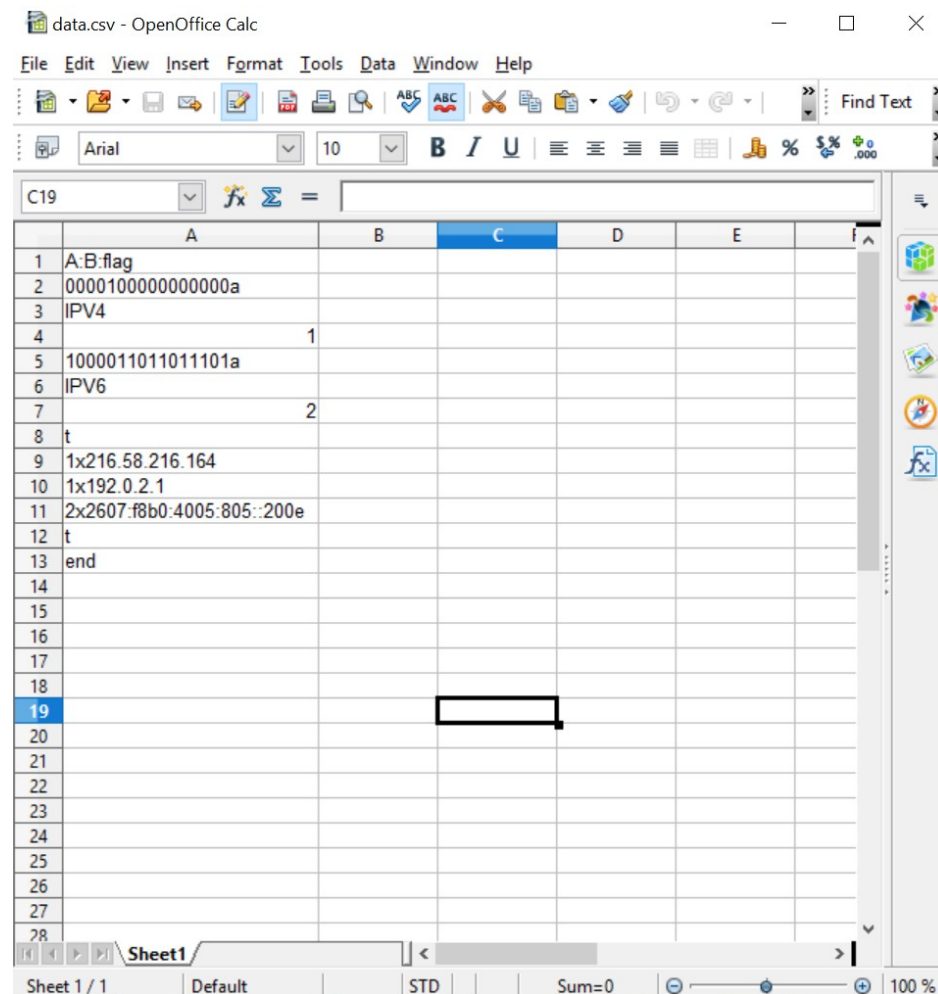
1. User runs setup.pl to create the firewall allowing both IPv4 and IPv6 Ether Type.

```
?- start().
Enter the adapter you want to use: 'A'.
Do you want to add more adapters?|: 'yes'.
Enter the adapter you want to use:|: 'B'.
Do you want to add more adapters?|: 'no'.
Do you want to allow IPv4 Ether Type?|: 'yes'.
Do you want to allow IPv6 Ether Type?|: 'yes'.
Enter the IP address to be blocked for IPV4|: '216.58.216.164'.
Do you want to add more?|: 'yes'.
Enter the IP address to be blocked for IPV4|: '192.0.2.1'.
Do you want to add more?|: 'no'.
Enter IP add to be blocked for IPV6:|: '2607:f8b0:4005:805::200e'.
Do you want to add more?|: 'no'.

true .

?-
```

CSV file created based on how the user configures the firewall.



	A	B	C	D	E	F
1	A:B:flag					
2	0000100000000000a					
3	IPV4					
4	1					
5	1000011011011101a					
6	IPV6					
7	2					
8	t					
9	1x216.58.216.164					
10	1x192.0.2.1					
11	2x2607:f8b0:4005:805::200e					
12	t					
13	end					
14						
15						
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### 1.1 If the packet tries accessing the wrong adapter

```
?- packetChk(['C','1000011011011101','216.58.216.164','00000110','00000111']).
Sending packet through firewall.
Not allowed to use adapter C.
true
```

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### 1.2 Input packet with 802.1q VLAN TPID.

```
?- packetChk(['A','1000000100000000','0000100000000000','172.16.254.1','00000110','00000111']).
Sending packet through firewall.
Using adapter A.
VLAN, hence rejected.
true
```

### 1.3 When the IP address of the packet is blocked by the firewall.

```
?- packetChk(['A','1000011011011101','2607:f8b0:4005:805::200e','00000001','00000011','00001101']).
Sending packet through firewall.
Using adapter A.
IPV6
2607:f8b0:4005:805::200e/ URL not allowed.
true
```

### 1.4 Packet with ether type IPV4 and TCP protocol number returning a message based on the TCP port number.

```
?- packetChk(['A','0000100000000000','172.16.254.1','00000110','0000111']).
Sending packet through firewall.
Using adapter A.
IPV4
172.16.254.1/ This URL is allowed.
TCP.
Echo Protocol.
true
```

### 1.5 Packet with ether type IPv6 returning a message according to the type and code.

```
?- packetChk(['A','1000011011011101','3407:g8a4:4005:805::200e','00000001','00000010','00000000']).
Sending packet through firewall.
Using adapter A.
IPV6
3407:g8a4:4005:805::200e/ This URL is allowed.
ICMPv6.
Packet Too Big.
true
```

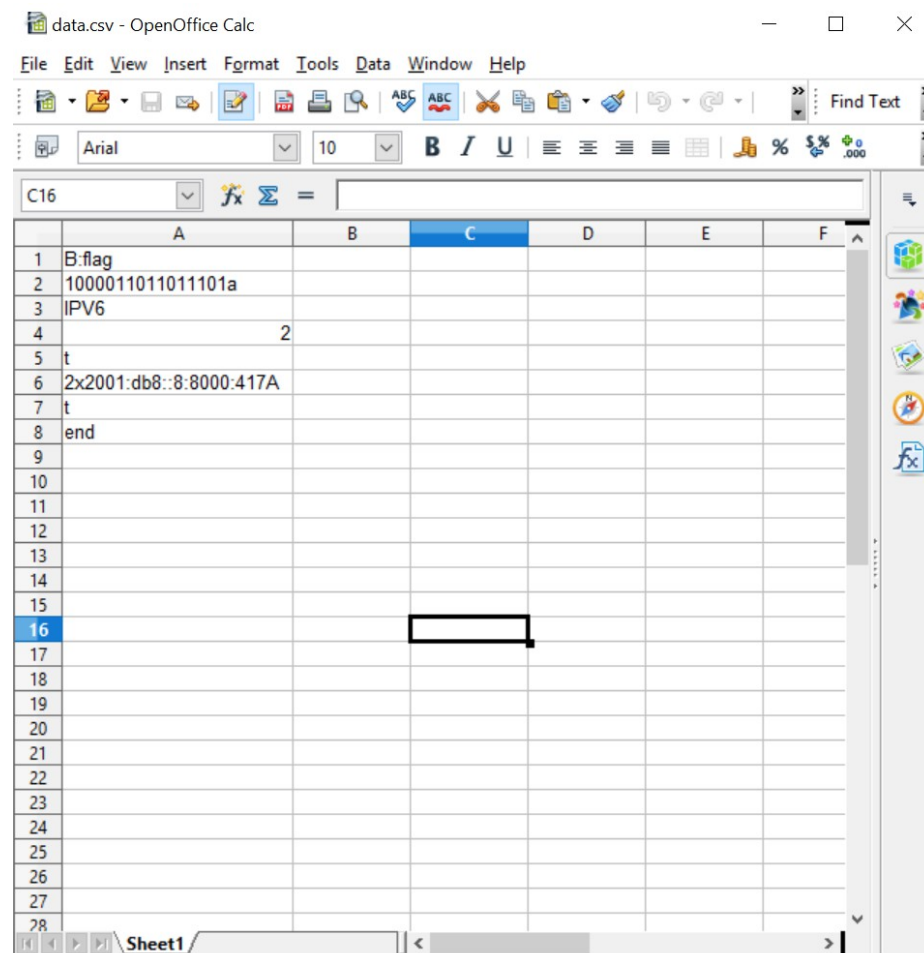
**NOTE:** The inputs shown with IPv4 can similarly be done with IPv6.

## 2. User runs setup.pl to create the firewall allowing only IPv6 Ether Type.

```
?- start().
Enter the adapter you want to use:'B'.
Do you want to add more adapters?|: 'no'.
Do you want to allow IPv4 Ether Type?|: 'no'.
Do you want to allow IPv6 Ether Type?|: 'yes'.
Enter IP add to be blocked for IPV6:|: '2001:db8::8:8000:417A'.
Do you want to add more?|: 'no'.
```

**true** .

CSV file created based on how the user configures the firewall.



### 2.1 Packet with IPv4 Ether type

```
?- packetChk(['B','0000100000000000','172.16.254.1','00000001','00000011','00000101']).
Sending packet through firewall.
Using adapter B.
Ether type doesnt exist.
true .
```

2.2 Packet with Ipv6 Ether type, UDP protocol number returning a message based on the port number.

```
?- packetChk(['B','1000011011011101','3407:g8a4:4005:805::200e','00010001','0100110']).
Sending packet through firewall.
Using adapter B.
IPV6
3407:g8a4:4005:805::200e/ This URL is allowed.
UDP.
Route Access Protocol.
true ■
```