

# Program installation instructions from GitHub



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## Prerequisites for Installation

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### 1. Operating System :

- This program is compatible with Windows, macOS, and Linux.

### 2. Python Installed:

- The program requires Python version 3.6 or later to run. You can verify your Python version by typing the following command in your terminal or command prompt:

```
python --version
```

- If Python is not installed, download and install it from [the official Python website](#).

### 3. Package Manager pip:

- pip is the Python package manager used to install the necessary libraries. It comes bundled with Python, but if it is not working, update or reinstall it using:

```
python -m ensurepip --upgrade
```

### 4. Git Installed:

- Git is required to clone the repository from GitHub. You can check if Git is installed by running:

```
git --version
```

- If it is not installed, download Git from [the official Git website](#) and follow the installation instructions for your operating system.

## Step-by-Step Installation Process

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### Step 1: Clone the GitHub Repository

The first step is to retrieve the program files from the GitHub repository:

1. Open your terminal (Command Prompt on Windows, Terminal on macOS, or any terminal emulator on Linux).
2. Execute the following command to clone the repository:

```
git clone https://github.com/pierreburnn/SA-05
```

This will create a local copy of the repository on your machine.

3. Navigate to the folder containing the program file Programme.py by entering the command:

```
cd SA-05/Présentation
```

### Step 2: Install the Necessary Dependencies

The program requires several Python libraries to function properly. These dependencies must be installed before running the program. Follow these steps:

1. If the repository contains a requirements.txt file, run the following command to install all dependencies at once:

```
pip install -r requirements.txt
```

2. If the requirements.txt file is missing, manually install the required libraries listed in the code:

```
pip install matplotlib pandas tkinter markdown
```

This command will individually install the necessary packages.

## Step-by-Step Installation Process

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### Step 3: Run the Program

Now that the dependencies are installed, you can run the program:

1. From the terminal, execute the following command:

```
python Programme.py
```

2. This will launch a graphical user interface where you can load and analyze files interactively.

## Troubleshooting Common Issues

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If you encounter any problems during the installation or execution of the program, refer to the solutions below:

- **Python is not recognized as a command:**
  - Ensure that Python is added to your system's PATH environment variable during installation. You can modify your PATH manually if needed.
  - Otherwise try replacing "python" with "python3" in the commands.
- **Pip is not recognized as a command:**
  - Otherwise try replacing "pip" with "pip3" in the commands.
- **Error installing dependencies:**
  - Sometimes pip might be outdated. Update pip using:
- **Missing or unrecognized dependencies:**
  - If a dependency fails to install, you can install it manually by running:

```
python -m pip install --upgrade pip
```

```
pip install [dependency name]
```

## Additional Resources

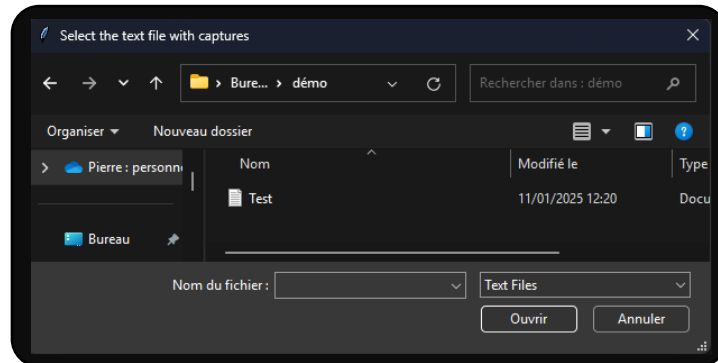
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Here are some links that can help you understand the tools and technologies involved in this process:

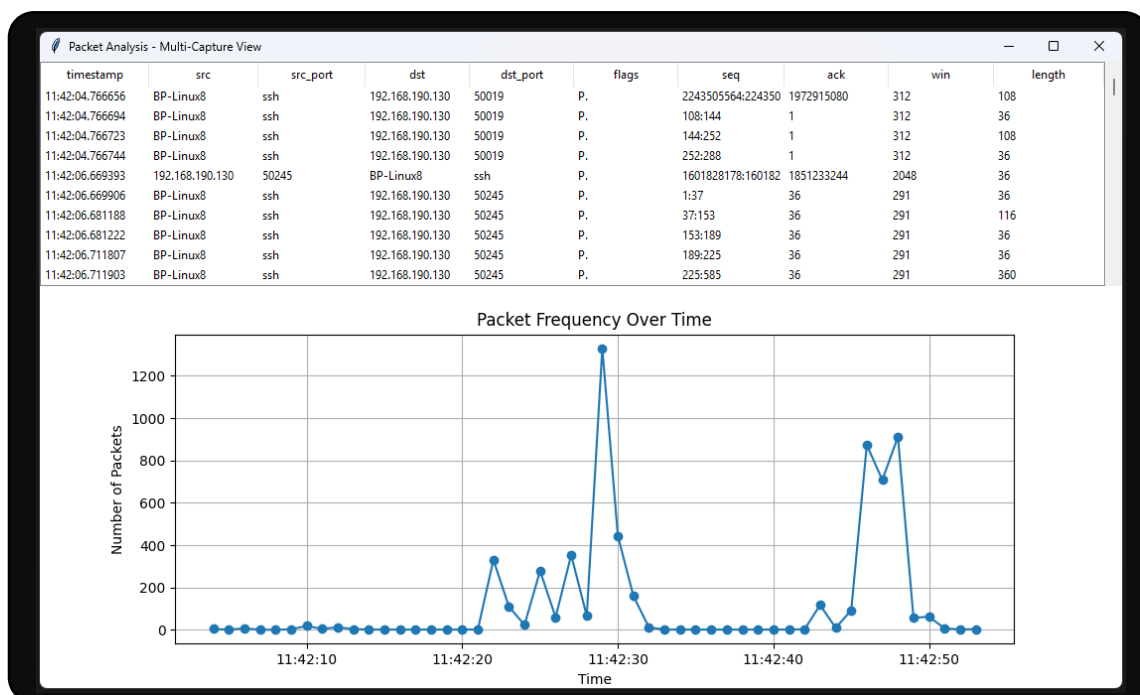
- [Python Documentation](#): Comprehensive documentation for Python programming.
- [Git Tutorial](#): Detailed instructions on how to use Git effectively.
- [pip User Guide](#): Information about managing Python packages.

## How to use it

First, after launching the software via the terminal, here is the result you should have:



Then you need to insert your TXT file. You should obtain a result like the one below. Your values will differ depending on the file you provide to the software.

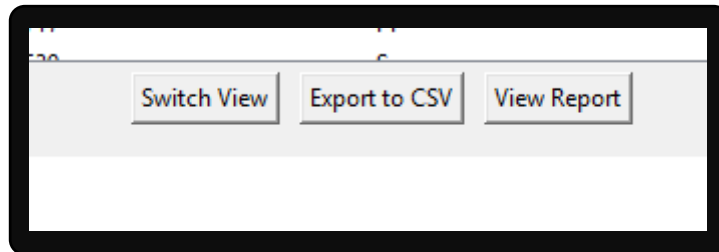




## How to use it

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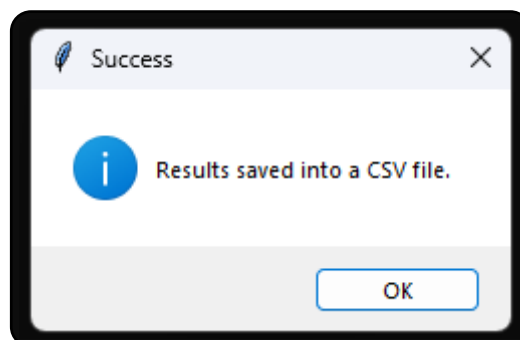
Once the software opens the previous page for you, you have 3 functionalities:



### Save CSV:

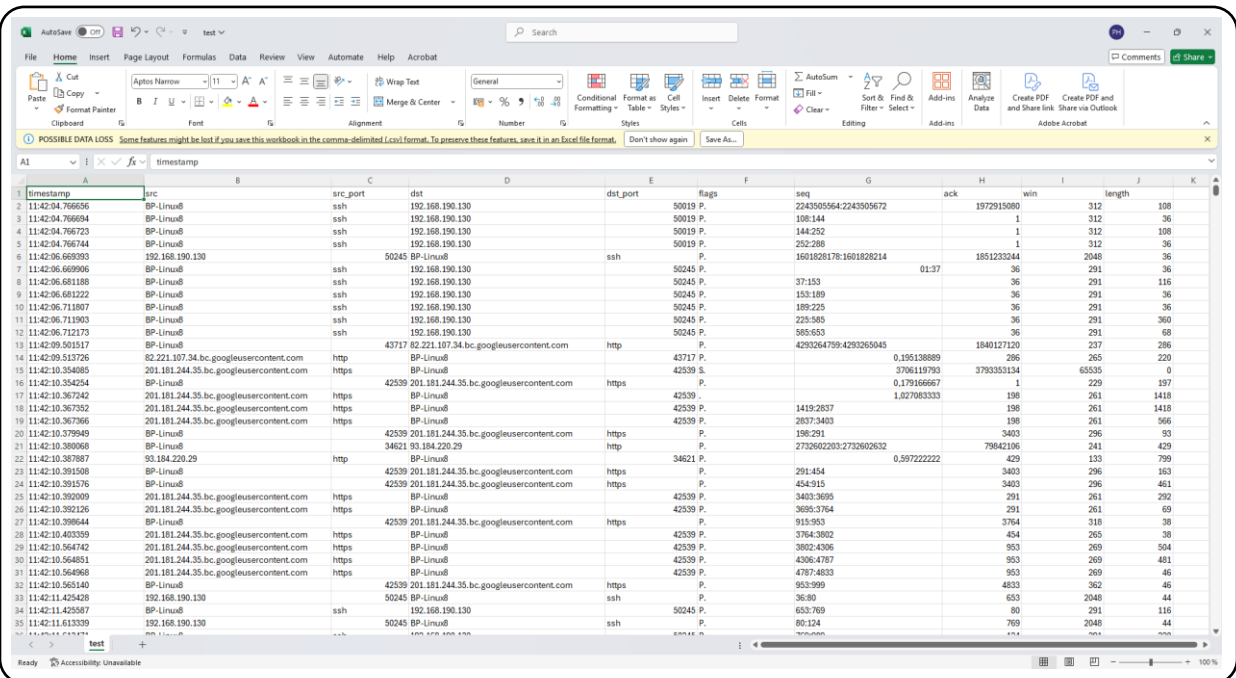
This allows you to create a table that you can open, for example, with Excel or any other spreadsheet software. A file explorer window (Windows) or Finder (Mac) will open, allowing you to choose the location where you want to save it.

Here is the message you should receive if you succeed:



## How to use it

Here is what you get when you open the CSV file in Excel:

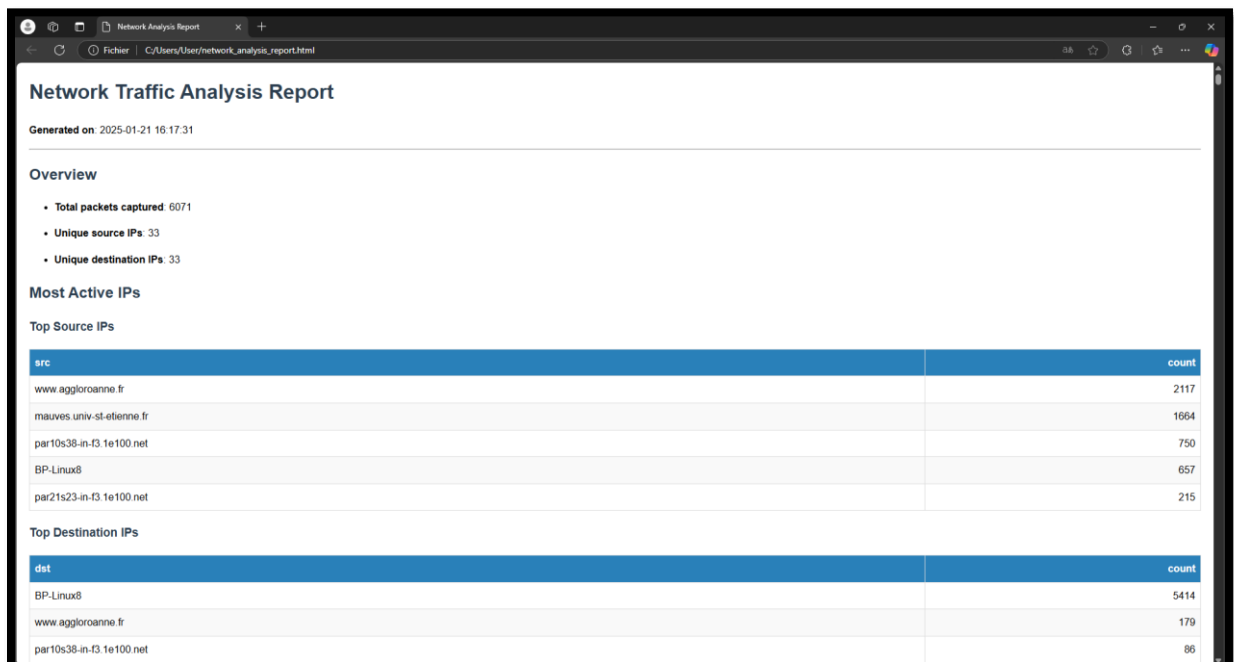


timestamp	src	src_port	dst	dst_port	flags	seq	ack	win	length
11:42:04.766036	BP-Linux8	ssh	192.168.190.130		50019 P.	2243505564:2243505672		1972915080	312
11:42:04.766094	BP-Linux8	ssh	192.168.190.130		50019 P.	108:144		1	312
11:42:04.766723	BP-Linux8	ssh	192.168.190.130		50019 P.	144:252		1	312
11:42:04.766744	BP-Linux8	ssh	192.168.190.130		50019 P.	252:288		1	312
11:42:06.669393	192.168.190.130		50245 BP-Linux8	ssh	P.	1601828178:1601828214		1851233244	2048
11:42:06.669906	BP-Linux8	ssh	192.168.190.130		50245 P.			36	291
11:42:06.681188	BP-Linux8	ssh	192.168.190.130		50245 P.	37:153	01:37	36	291
11:42:06.681222	BP-Linux8	ssh	192.168.190.130		50245 P.	153:189		36	291
11:42:06.711807	BP-Linux8	ssh	192.168.190.130		50245 P.	189:225		36	291
11:42:06.712173	BP-Linux8	ssh	192.168.190.130		50245 P.	225:585		36	291
11:42:09.503117	BP-Linux8		43717 82.221.107.34.bc.googleusercontent.com	http	P.	585:653		36	291
11:42:09.503117	BP-Linux8		43717 82.221.107.34.bc.googleusercontent.com	http	P.	4293264799:4293265045		1840127120	237
11:42:09.513726	82.221.107.34.bc.googleusercontent.com	http	BP-Linux8		43717 P.		0.195138889	296	265
11:42:10.354085	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 S.		3706119793	3793353134	65535
11:42:10.354254	BP-Linux8		42539 201.181.244.35.bc.googleusercontent.com	https	P.		0.179166667	1	229
11:42:10.367242	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.		1.027083333	198	261
11:42:10.367352	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	1419:2837		198	261
11:42:10.367366	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	2837:3403		198	261
11:42:10.379949	BP-Linux8		42539 201.181.244.35.bc.googleusercontent.com	https	P.	198:291		3403	296
11:42:10.380068	BP-Linux8		34621 93.184.220.29	http	P.	272602203:272602632		79842106	241
11:42:10.387887	93.184.220.29	http	BP-Linux8		34621 P.		0.597222222	429	133
11:42:10.391508	BP-Linux8		42539 201.181.244.35.bc.googleusercontent.com	https	P.	291:454		3403	296
11:42:10.391576	BP-Linux8		42539 201.181.244.35.bc.googleusercontent.com	https	P.	454:915		3403	296
11:42:10.392009	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	3403:3695		291	261
11:42:10.392126	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	3695:3764		291	261
11:42:10.398644	BP-Linux8		42539 201.181.244.35.bc.googleusercontent.com	https	P.	915:953		3764	318
11:42:10.403359	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	3764:3802		454	265
11:42:10.564742	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	3802:4306		953	269
11:42:10.564851	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	4306:4787		953	269
11:42:10.564968	201.181.244.35.bc.googleusercontent.com	https	BP-Linux8		42539 P.	4787:4833		953	269
11:42:10.565140	BP-Linux8		42539 201.181.244.35.bc.googleusercontent.com	https	P.	953:999		4833	362
11:42:11.425428	192.168.190.130		50245 BP-Linux8	ssh	P.	36:80		653	2048
11:42:11.425587	BP-Linux8	ssh	192.168.190.130		50245 P.	653:769		80	291
11:42:11.613339	192.168.190.130		50245 BP-Linux8	ssh	P.	80:124		769	2048

## Open in browser:

If you decide to click on the View Report\* button, it will open a table in your default browser.

Here is what you should have:



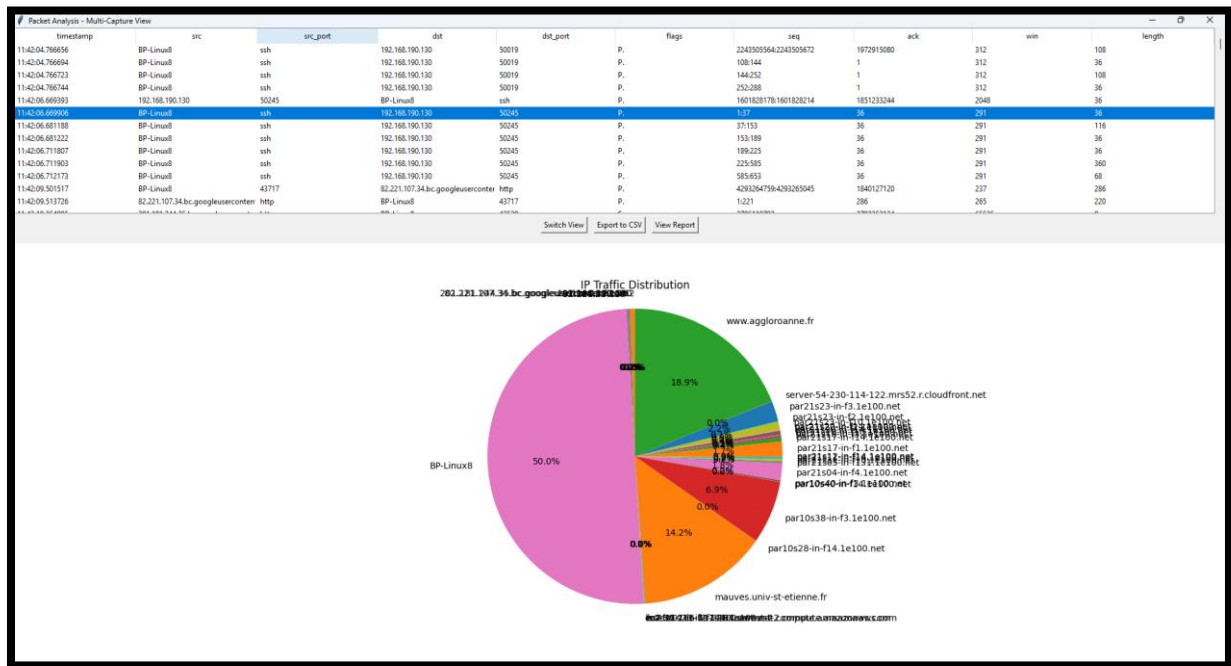
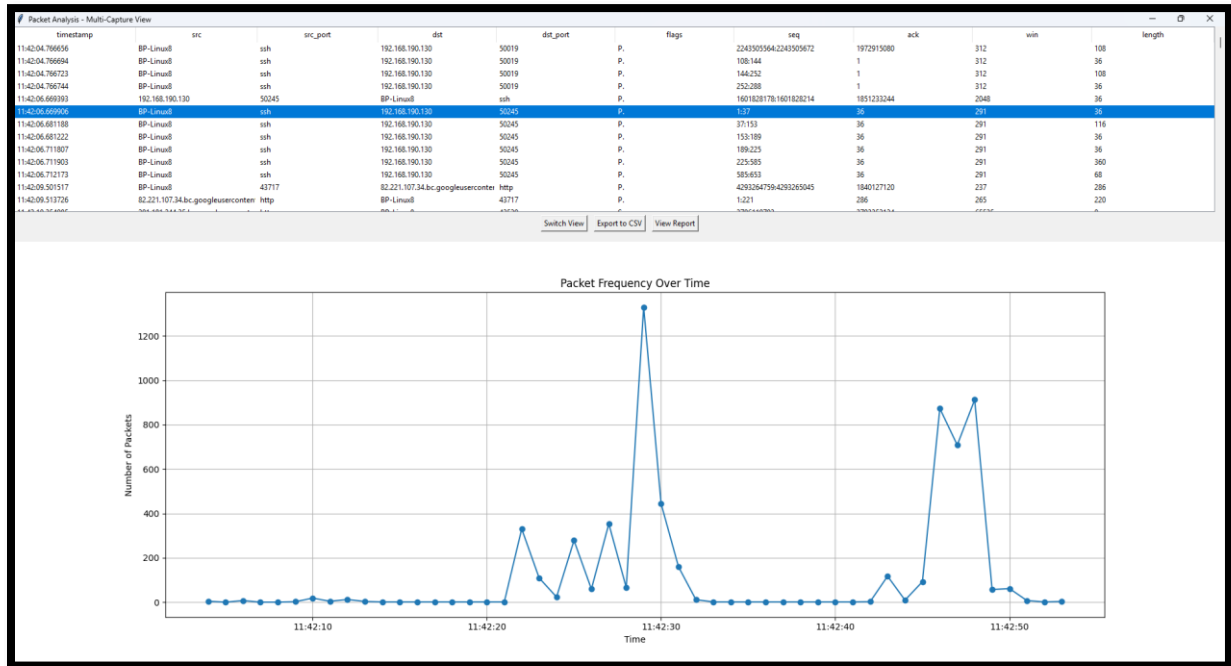
Network Traffic Analysis Report	
Generated on: 2025-01-21 16:17:31	
<b>Overview</b>	
• Total packets captured: 6071	
• Unique source IPs: 33	
• Unique destination IPs: 33	
<b>Most Active IPs</b>	
<b>Top Source IPs</b>	
src	count
www.aggloranne.fr	2117
mauves.univ-st-etienne.fr	1664
par10s38-in-f3.1e100.net	750
BP-Linux8	657
par21s23-in-f3.1e100.net	215
<b>Top Destination IPs</b>	
dst	count
BP-Linux8	5414
www.aggloranne.fr	179
par10s38-in-f3.1e100.net	86

\* HTML file will be automatically saved to the disk of your computer.

## How to use it

### Switch View:

The button to Switch View allows changing the chart to view different statistics.



## How to use Excel

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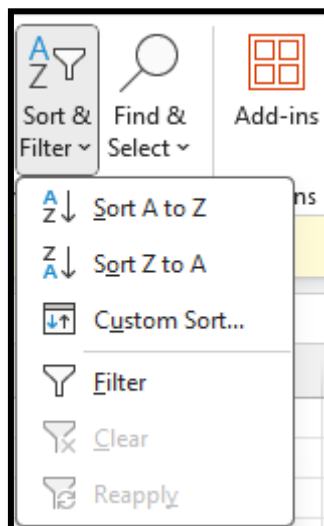
Once in Excel, you can sort in different ways.

Are you looking for a specific protocol?

Go to the top in "Home."



Click on "Sort & Filter" :

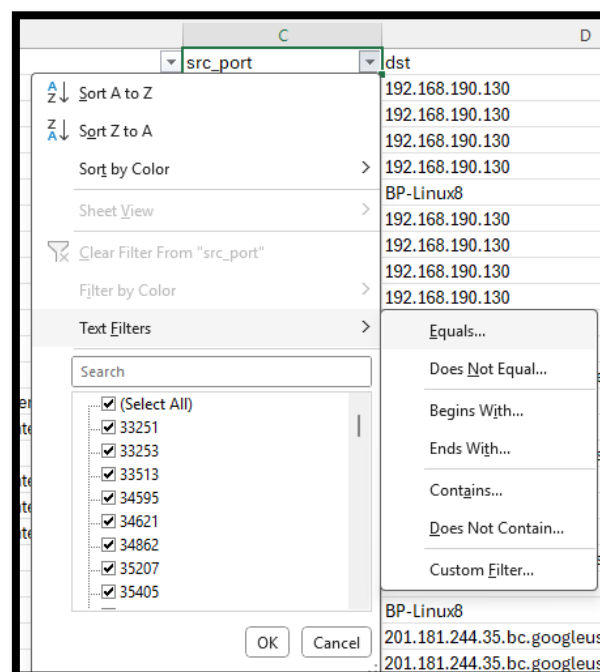
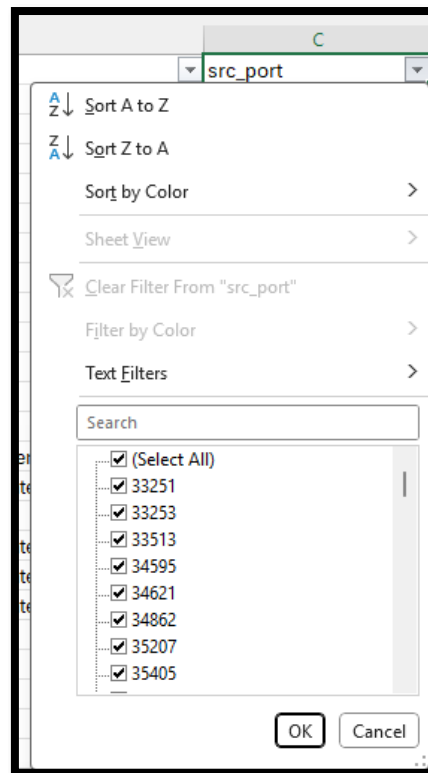


Then click on Filter, and you should see arrows in column 1 :



## How to use Excel

Click on one of the arrows in column 1. If you want to search for a specific type of protocol, click on the column with the ports where you will find the protocol. Here's what you should see:



## How to use Excel

Once you have clicked on Equals:

Custom Autofilter

Show rows where:  
src\_port

equals

☒ And ☐ Or

Use ? to represent any single character  
Use \* to represent any series of characters

OK Cancel

Type "HTTP," for example, and click OK.

Custom Autofilter

Show rows where:  
src\_port

equals

http

☒ And ☐ Or

Use ? to represent any single character  
Use \* to represent any series of characters

OK Cancel

	A	B	C	D	E	F	G	H	I	J	K
1	timestamp	src	src_port	dst	dst_port	flags	seq	ack	win	length	
16	11:42:09.313726	82.221.107.34 bc.googleusercontent.com	http	BP-Linux8	43717 P.			0.195139809	286	255	220
32	11:42:10.387687	93.184.220.29	http	BP-Linux8	34621 P.			0.597222222	429	133	799
592	11:42:25.284864	pa21s05-in-f131.1e100.net	http	BP-Linux8	37231 P.			0.529861111	433	286	702
619	11:42:25.393967	pa21s05-in-f131.1e100.net	http	BP-Linux8	37231 P.	703:1405			865	290	702
621	11:42:25.396937	pa21s05-in-f131.1e100.net	http	BP-Linux8	37253 S.			1791533821	316534575	65535	0
622	11:42:25.396970	pa21s05-in-f131.1e100.net	http	BP-Linux8	37253 S.			1621815664	3356013554	65535	0
623	11:42:25.396982	pa21s05-in-f131.1e100.net	http	BP-Linux8	37254 S.			4020988896	905855320	65535	0
624	11:42:25.397061	pa21s05-in-f131.1e100.net	http	BP-Linux8	37256 S.			2375422181	665201308	65535	0
625	11:42:25.405593	pa21s05-in-f131.1e100.net	http	BP-Linux8	37257 S.			2089852434	204602233	65535	0
639	11:42:25.445804	pa21s05-in-f131.1e100.net	http	BP-Linux8	37231 P.	1405:2107			1297	294	702
658	11:42:25.468575	pa21s05-in-f131.1e100.net	http	BP-Linux8	37257 P.			0.529861111	433	261	702
659	11:42:25.468782	pa21s05-in-f131.1e100.net	http	BP-Linux8	37256 P.			0.529861111	433	261	702
1509	11:42:29.533798	pa21s05-in-f131.1e100.net	http	BP-Linux8	37231 P.	2107:2809			1729	298	702
1731	11:42:30.602254	pa21s05-in-f131.1e100.net	http	BP-Linux8	37255 F.			1	2	256	0
1732	11:42:30.602367	pa21s05-in-f131.1e100.net	http	BP-Linux8	37254 F.			1	2	256	0
1733	11:42:30.602377	pa21s05-in-f131.1e100.net	http	BP-Linux8	37253 F.			1	2	256	0
1866	11:42:30.801495	pa21s05-in-f131.1e100.net	http	BP-Linux8	37257 P.	703:1404			864	265	701
1887	11:42:49.144797	104.18.31.182	http	BP-Linux8	35405 S.			2746231788	1459256218	65535	0
1900	11:42:49.203855	104.18.31.182	http	BP-Linux8	35405 P.			0.728472222	432	66	988