

Python Public IP in Linux

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Time required: 60 minutes

Python in Linux

Python3 is installed in most common Linux distributions. This tutorial is based on using Kali Linux.

NOTE: Commands, filenames, and directories are case sensitive.

Common Linux Commands

su – (change logon to root)

sudo (runs a command as root)

ifconfig

ls (lists files or directories)

cd (change directories)

mkdir (makes directories)

rmdir (removes directories)

cp (copy file)

rm (delete file)

chmod (modify file and directory security)

grep (search text file for characters)

passwd (create or change password)

Install Kali Linux

If you already have Kali Linux as a virtual machine, you can skip this part.

Kali Linux is available in a prebuilt virtual machine.

1. If you do not have VirtualBox on your computer, go to www.virtualbox.org.
2. Download and install the version for your operating system.
3. Go to <https://www.kali.org/get-kali/#kali-virtual-machines>
4. Download the 64-bit VirtualBox image. This can take some time as the file is 4 GB.
5. Double Click the file you have downloaded. It will ask to be imported into VirtualBox.
6. Start Kali Linux.
7. The username and password is **kali**

Tutorial 1: Public IP CLI

1. Logon to Kali Linux.
2. Start a Terminal session.

Geany is a simple IDE that we will use to code our Python program.

3. Install Geany: **sudo apt install geany**

You are in your home directory. We are going to make a folder to store our Python programs.

4. Create a folder: **mkdir Code**
5. Change to Code folder: **cd Code**

We are going to launch Geany and create our Python program file in the same command.

6. **geany public_ip.py**
7. The Geany IDE will open with public_ip_cli.py
8. Add the following code to the file.

```

1  """
2      Name: public_ip_cli.py
3      Author:
4      Created:
5      Purpose: Get Public IP address from httpbin.org
6  """
7
8  # Import the requests module
9  # pip install requests    # Windows
10 # pip3 install requests   # Linux
11 import requests
12
13 # URL for Public IP requests
14 API_URL = "http://httpbin.org/ip"

```

```

16
17 def main():
18     # Use the requests.get() function with the parameter of the API_URL
19     response = requests.get(API_URL)
20
21     # If the status_code is 200, successful connection and data
22     if response.status_code == 200:
23
24         # Display the status code
25         print(
26             f"Request status code: {response.status_code}\n")
27
28         # Convert the JSON data into a Python dictionary with key value pairs
29         data = response.json()
30
31         # Display the raw JSON data from the API for troubleshooting
32         print("The raw JSON data from the API:")
33         print(response.text)
34
35         # Display the Python dictionary for troubleshooting
36         print("The JSON data converted to a Python dictionary:")
37         print(data)
38
39         # Get the public IP value using the origin key
40         public_ip = data.get("origin")
41
42         # Print the data using the dictionary created from the API JSON data
43         print(f"\nYour public IP address: {public_ip}")
44
45         # Display menu choices
46         answer = input(
47             "\n[Enter] to quit)? ")
48
49
50 # Call the main method to start the program
51 main()

```

To run the program in Linux: At a terminal session: **python3 public_ip_cli.py**

Example run: Your public IP is likely to be different than the example.

```
(user@kali)-[~]
$ python3 public_ip_cli.py
Request status code: 200
The raw JSON data from the API:
{
  "origin": "198.178.29.135"
}
The JSON data converted to a Python dictionary:
{'origin': '198.178.29.135'}
Your public IP address: 198.178.29.135
[Enter] to quit)?
```

Assignment 1: Python Public IP Program GUI

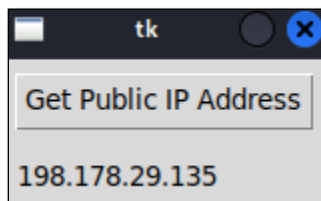
Same program in Tkinter. Almost any Python program can be used in Windows or Linux.

Create a Python program in Linux named **public_ip_gui.py**

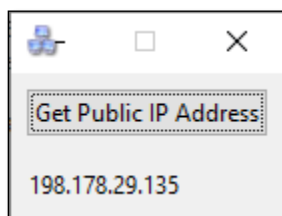
To run the program in Linux: At a terminal session: **python3 public_ip_gui.py**

Example run:

Linux



Windows



Assignment Submission

Linux has Firefox as a web browser. You can use that to submit your code files.

1. Attach all program files.
2. Attach a screenshot of each successful program run.
3. Submit the assignment in Blackboard.