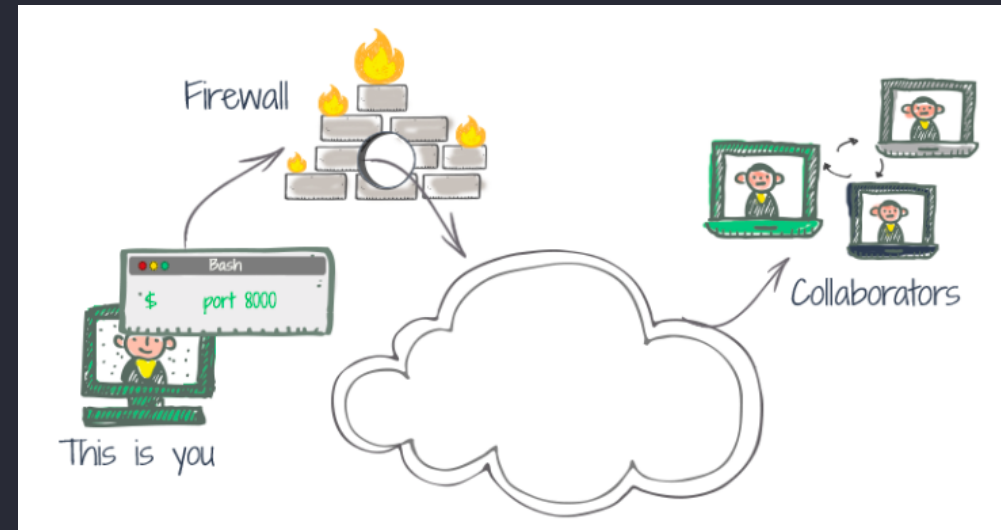# ngrok

a.k.a. How to oobtain public url

Motivation

In a a lot of cases you would like to give access to an user or an application to a web service that is running on your pc (*localhost*) or vice versa you want to access to a web service that is running on the pc outside your home network. What solves that? **Tunneling!**
How to do that **ngrok**!

Install ngrok

1. Go on https://ngrok.com/

2. Register

3. Follow the instuction listed here for the initial setup

Run vanilla ngrok

Let's suppose you've a web service running on localhost at the port 8080, to obtain an public url you just need to open a new terminal and type `ngrok http 8080` this will start a tunnelfor that port and will show something like this

```
ngrok by @inconshreveable                                      (Ctrl+C to quit)

Session Status                online
Account                       OrlandoMatteo (Plan: Free)
Version                       2.3.35
Region                        United States (us)
Web Interface                 http://127.0.0.1:4040
Forwarding                    http://3e5f67e659f6.ngrok.io -> http://localhost:8080
Forwarding                    https://3e5f67e659f6.ngrok.io -> http://localhost:8080

Connections                   ttl       opn       rt1       rt5       p50       p90
                              0         0         0.00      0.00      0.00      0.00
```

After doing that, you will be able to see your webservice at the links indicated by *Forwarding* (in the example https://3e5f67e659f6.ngrok.io) and you will be able to acces to it from any device even outside your home network (try with your smartphone or ask a friend to do that). **Remember that everytime the url is generated randomly!**

Configure ngrok

If we want to do thi often always for the same application we may want to edit our configuration file. You should find the file *ngrok.yml* here:

Operative system	file location
OS X	/Users/example/.ngrok2/ngrok.yml
Linux	/home/example/.ngrok2/ngrok.yml
Windows	C:\Users\example.ngrok2\ngrok.yml

In this file you should have already a line with `authtoken:xxxxxxxxxxxxx` . After this line we can add our tunnels that we use frequently like so

```
tunnels:
  my-cool-website:
    proto: http
    addr: 8000
```

after doing that we will able to launch our tunnel from the terminal by typing `ngrok start <tunnel-name>` . In our example it would be `ngrok start my-cool-website` python

Obtain the url from python

In some cases we may need to obtain the url for our web service,in order to do that we can do as follows:

```python
import requests
r= requests.get('http://localhost:4040/api/tunnels/<tunnel-name>')
publicUrl=r.json()["public_url"]
```

For our example it would be

```python
r= requests.get('http://localhost:4040/api/tunnels/my-cool-website')
publicUrl=r.json()["public_url"]
```

Alternatives

There are several alternative to ngrok (free or paid) that you can find [here](#)