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Solución parcial 1 Sistemas operacionales

Creación del usuario filesystem_user:

```
root@localhost:~# deactivate
[root@localhost ~]# adduser filesystem_user
[root@localhost ~]# passwd filesystem_user
Changing password for user filesystem_user.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]#
```

Instalacion de virtualenv:

```
filesystem_user@localhost:tmp
[filesystem_user@localhost tmp]$ cd /tmp
[filesystem_user@localhost tmp]$ wget https://bootstrap.pypa.io/get-pip.py
--2016-10-19 07:13:09-- https://bootstrap.pypa.io/get-pip.py
Resolving bootstrap.pypa.io... 151.101.48.175
Connecting to bootstrap.pypa.io[151.101.48.175]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1524722 (1.5M) [text/x-python]
Saving to: "get-pip.py.2"

100%[=====>] 1,524,722 111K/s in 14s

2016-10-19 07:13:23 (110 KB/s) - "get-pip.py.2" saved [1524722/1524722]

[filesystem_user@localhost tmp]$ python get-pip.py
DEPRECATION: Python 2.6 is no longer supported by the Python core team, please upgrade your Python. A future version of pip will drop support for Python 2.6
/tmp/tmp4XtfDD/pip.zip/pip/_vendor/requests/packages/urllib3/util/ssl_.py:318: SNIMissingWarning: An HTTPS request has been made, but the SNI (Subject Name Indication) extension to TLS is not available on this platform. This may cause the server to present an incorrect TLS certificate, which can cause validation failures. You can upgrade to a newer version of Python to solve this. For more information, see https://urllib3.readthedocs.org/en/latest/security.html#snimissingwarning.
/tmp/tmp4XtfDD/pip.zip/pip/_vendor/requests/packages/urllib3/util/ssl_.py:122: InsecurePlatformWarning: A true SSLContext object is not available. This prevents urllib3 from configuring SSL appropriately and may cause certain SSL connections to fail. You can upgrade to a newer version of Python to solve this. For more information, see https://urllib3.readthedocs.org/en/latest/security.html#insecureplatformwarning.
Requirement already up-to-date: pip in /usr/lib/python2.6/site-packages
/tmp/tmp4XtfDD/pip.zip/pip/_vendor/requests/packages/urllib3/util/ssl_.py:122: InsecurePlatformWarning: A true SSLContext object is not available. This prevents urllib3 from configuring SSL appropriately and may cause certain SSL connections to fail. You can upgrade to a newer version of Python to solve this. For more information, see https://urllib3.readthedocs.org/en/latest/security.html#insecureplatformwarning.
[filesystem_user@localhost tmp]$ pip install virtualenv
DEPRECATION: Python 2.6 is no longer supported by the Python core team, please upgrade your Python. A future version of pip will drop support for Python 2.6
Requirement already satisfied (use --upgrade to upgrade): virtualenv in /usr/lib/python2.6/site-packages
[filesystem_user@localhost tmp]$
```

Creación de entorno y de archivo py

```
Requirement already satisfied (use --upgrade to upgrade): virtualenv in /usr/lib/python2.6/site-packages
[filesystem_user@localhost tmp]$ cd ~/
[filesystem_user@localhost ~]$ mkdir envs
[filesystem_user@localhost ~]$ cd envs
[filesystem_user@localhost envs]$ virtualenv flask_env
New python executable in /home/filesystem_user/envs/flask_env/bin/python
Installing setuptools, pip, wheel...done.
[filesystem_user@localhost envs]$ c. flask_env/bin/activate
bash: c.: command not found
[filesystem_user@localhost envs]$ . flask_env/bin/activate
(flask_env) [filesystem_user@localhost envs]$
(flask_env) [filesystem_user@localhost envs]$ cd
(flask_env) [filesystem_user@localhost ~]$ cd
(flask_env) [filesystem_user@localhost ~]$ mkdir -p flask_test/parcial
(flask_env) [filesystem_user@localhost ~]$ ls
envs flask_test
(flask_env) [filesystem_user@localhost ~]$ cd flask_test/parcial/
(flask_env) [filesystem_user@localhost parcial]$
(flask_env) [filesystem_user@localhost parcial]$ nano script.py
(flask_env) [filesystem_user@localhost parcial]$
```

Apertura de puertos

```
# Generated by iptables-save v1.4.7 on Sat Oct  8 16:50:19 2016
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [180:10741]
-A INPUT -m state --state RELATED,ESTABLISHED -j ACCEPT
-A INPUT -p icmp -j ACCEPT
-A INPUT -i lo -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 22 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 8080 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 80 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 3000 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 8000 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 9880 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 8081 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 8084 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 5000 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 9980 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 8088 -j ACCEPT
-A INPUT -j REJECT --reject-with icmp-host-prohibited
-A FORWARD -j REJECT --reject-with icmp-host-prohibited
COMMIT
# Completed on Sat Oct  8 16:50:19 2016
```

Creación del script principal, que llama al archivo functions.py

```
api_url = '/v1.0'

@app.route(api_url+'/files',methods=['POST'])
def create_file():
    content = request.get_json(silent=True)
    filename = content['filename']
    content = content['content']
    if not filename or not content:
        return "cannot create empty file", 400
    if create_files(filename,content):
        return "HTTP 201 CREATED", 201
    else:
        return "error while creating user", 400

@app.route(api_url+'/files',methods=['GET'])
def get_fileList():
    list = {}
    list["files"] = get_all_files()
    return json.dumps(list), 200

@app.route(api_url+'/files',methods=['PUT'])
def update_user():
    return "HTTP 404 NOT FOUND", 404

@app.route(api_url+'/files',methods=['DELETE'])
def delete_files():
    if delete_all_files():
        return 'HTTP 200 OK', 200
    else:
        return 'ERROR', 200

@app.route(api_url+'/files/recently_created',methods=['POST'])
def func1():
    return "HTTP 404 NOT FOUND", 404

@app.route(api_url+'/files/recently_created',methods=['GET'])
def get_rece_files():
    vip = ["carta","listado","tareas","recordatorio"]
    for file in get_recent_files()
        if file not in vip
            return "error"
        else:
            return get_recent_files()

@app.route(api_url+'/files/recently_created',methods=['PUT'])
def func2():
    return "HTTP 404 NOT FOUND", 404

@app.route(api_url+'/files/recently_created',methods=['DELETE'])
def func3():
    return "HTTP 404 NOT FOUND", 404

if __name__ == "__main__":
    app.run(host='0.0.0.0',port=8088,debug=True)
```

Archivo functions.py

```
[filesystem_user@localhost parcial]$ cat functions.py
from subprocess import Popen, PIPE

def create_files(filename,content):
    filecreate = Popen(["sudo","mkdir",filename], stdout=PIPE, stderr=PIPE)
    writeFile = Popen(["echo",content,">>", filename], stdin=filecreate.stdout, stdout=PIPE, stderr=PIPE).communicate()
    return True

def get_all_files():
    listF = Popen(["ls","|","col","-b"], stdout=PIPE, stderr=PIPE).communicate()
    listF.wait()
    return filter(None, listF)

def delete_all_files():
    vip = Popen(["rm","-r", "/home/filesystem_user/flask_test/parcial/prueba/*"], stdout=PIPE, stderr=PIPE).communicate()
    vip.wait()
    return True

def get_recent_files():
    rF = Popen(["ls", "-lat"], stdout=PIPE, stderr=PIPE)
    list = Popen(["awk","'{print $9}'"], stdin=rF.stdout, stdout=PIPE, stderr=PIPE).communicate()
    list.wait()
    return filter(None,list)

[filesystem user@localhost parcial]$
```

url de repositorio:

<https://github.com/jdcmena/parcial1>