

# Installing PAN-OS-PHP

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# 1. Mac OS X

You need to run PHP 5.4 or later (tested with 7.4 at the time of this writing). PHP 5.4 is available natively on Mac OS X 10.9.x.

The following command will help you to determine your PHP version : "php -v"

```
[ ] swaschkut$ php -v
PHP 7.1.23 (cli) (built: Feb 22 2019 22:19:32) ( NTS )
Copyright (c) 1997-2018 The PHP Group
Zend Engine v3.1.0, Copyright (c) 1998-2018 Zend Technologies
```

## 1.1. Check your Palo Alto Networks Enterprise GitHub account

Using github's utilities to maintain a fresh copy of PAN-OS-PHP by looking for the latest sources for you.

## 1.2. Install and setup GitHub Desktop for Mac

Download the client from <https://desktop.github.com/> and install it. Start the client and it will first request for your Github Enterprise login.

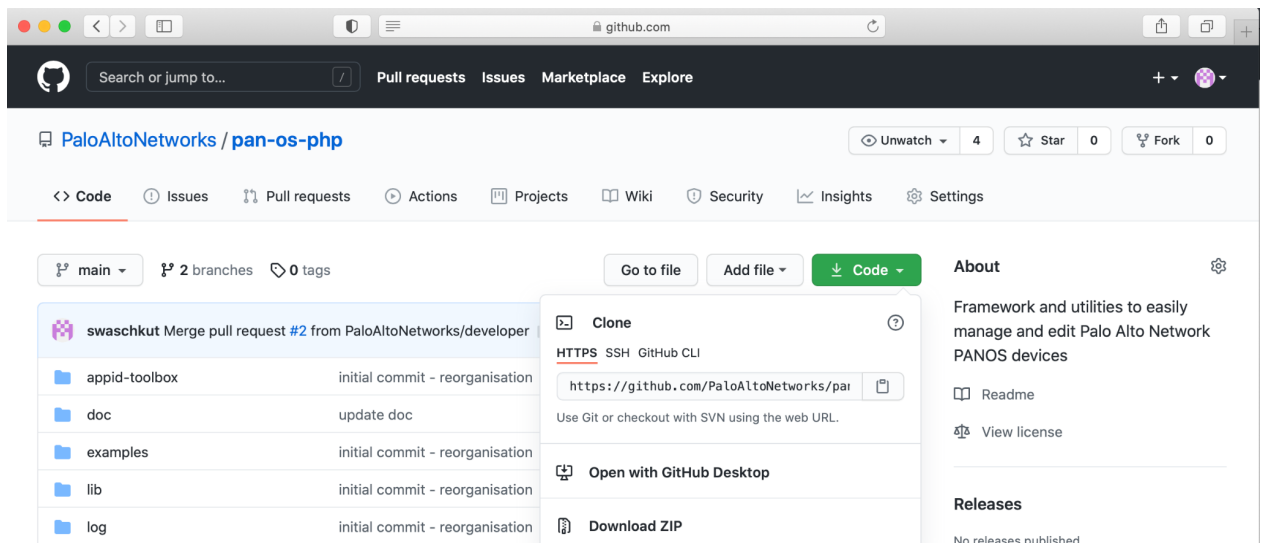
## 1.3. Bookmark/Star PAN-OS-PHP project

In order to know when a new version is out and also look for the project easier in GitHub client, it's a good idea to Star/bookmark the project and eventually.

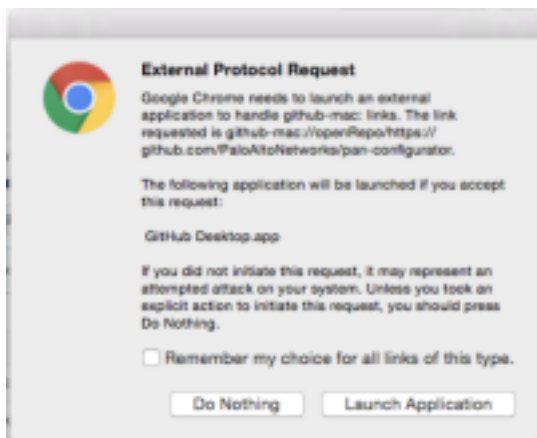
For this, go to the project page (<https://github.com/PaloAltoNetworks/pan-os-php>) and click on the "Star" button (see screenshot) and optionally on the "Watch" button to Watch it.

## 1.4. Clone PAN-OS-PHP repository

Still on PAN-OS-PHP Github homepage, click the Clone button like below :



Chrome will warn you that it will open external program GitHub Desktop, click “Launch Application”:



Github will then ask you in which location you want to install PAN-OS-PHP.  
Suggestion : install it in your Documents/pstools/pan-os-php (like in screenshot):

Clone a Repository

GitHub.com

GitHub Enterprise Server

URL

Repository URL or GitHub username and repository  
(hubot/cool-repo)

https://spring.paloaltonetworks.com/swaschkut/Expedition-Converter

Local Path

/Users/swaschkut/Documents/PAN\_scripting/Expedition-Conver

Choose...

Cancel

Clone

Upon successful download of latest sources, GitHub Desktop should be showing something similar to this screenshot:

Current Repository

pan-os-php

Current Branch

developer

Fetch origin

Last fetched 5 minutes ago

Changes

History

Select Branch to Compare...

introduce travis-ci for automatic unit testing

Sven Waschkut • 1h

update doc

Sven Waschkut • 1d

UTIL | fix for including framework and util library

Sven Waschkut • 2d

UTILS | bugfix add missing set\_include\_path for differen...

Sven Waschkut • 2d

cleanup Dockerfile

Sven Waschkut • 2d

UTILS | update include\_path for proper use on sub proje...

Sven Waschkut • 2d

Update README.md

Sven Waschkut • 2d

initial commit - reorganisation

Sven Waschkut • 2d

Initial commit

Sven Waschkut • 2d

introduce travis-ci for automatic unit testing

Sven Waschkut • 0ef7d41 • 3 changed files

.travis.yml

CHANGELOG.txt

README.md

@@ -0,0 +1,18 @@

1 +language: php

2 +php:

3 + - '5.6'

4 + - '7.4'

5 +

6 +script:

7 + - cd examples

8 + - php example-add-security-profile-to-all-rules.php

9 + - php example-basics-panos.php

10 + - php example-panorama-unused-objects.php

11 + - cd ../tests

12 + - php test\_filters.php

13 + - php test\_actions.php

14 + - php test\_mergers.php

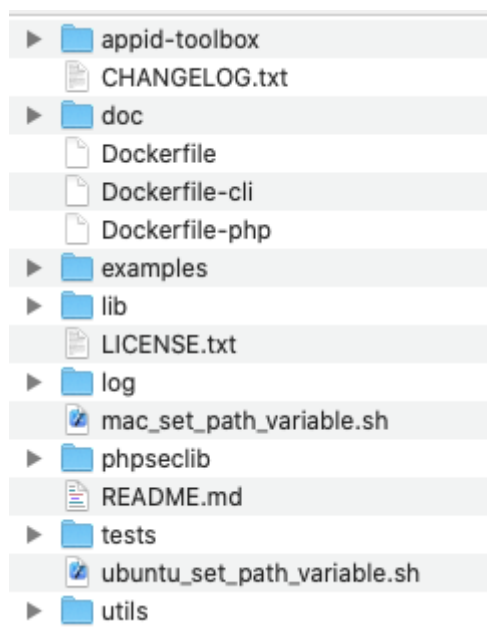
15 +

16 +notifications:

17 + email:

18 + - swaschkut@paloaltonetworks.com

If you browse to the folder where you install PAN-OS-PHP, you should see its file structure:



## 1.5. Add PAN-OS-PHP install directory to PHP include\_dir

The next two steps; 1.5 and 1.6 are now automated.

Please execute the bash script:

```
sh mac_set_path_variable.sh
```

```
sudo cp -f /etc/php.ini.default /etc/php.ini
sudo chmod u+w /etc/php.ini
echo "include_path = \".:/php/includes:/Users/$USER/Documents/pstools/pan-os-php\"" | sudo tee-a
/etc/php.ini
```

PHP stores its configurations in “/etc/php.ini”. If this file does not exist yet on your system, you need to copy the default template, you can do this from CLI. You can also use the following CLI to overwrite your existing PHP configuration:

If you want to do this manually, edit /etc/php.ini with your favorite editor (be careful of the root privilege required) to edit property “include\_path” to add the path to pan-configurator.

You can test that you installed everything properly by testing the following command line:

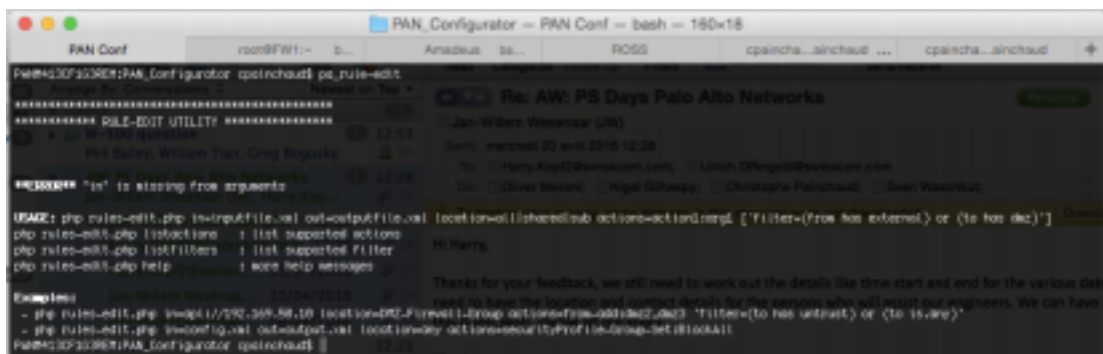
```
php -r "require('lib/pan_php_framework.php');print \"OK INSTALL  
SUCCESSFUL\\n\\n\";" OK INSTALL SUCCESSFUL
```

## 1.6. Load PAN-OS-PHP alias for your CLI

If you already executed the bash script of part 1.5, without any issue, skip this part. It will be very convenient to load the PAN-OS-PHP toolset from any location on your folder. For this you can load an alias file every time you start a new CLI console. Use the following command-line to add it in your ~/.profile :

```
echo "source \"~/Users/$USER/Documents/pstools/pan-os-php/utls/alias.sh\"" >> ~/.profile
```

Now open a new CLI console (to reload all your environment) and try to run command “pa\_rule-edit”:



```
PAN_Configurator - PAN Conf - bash - 160x18  
PAN Conf root@FRT:~# b... Anadeus ss... RCGG cpaicha...sinchaud ... cpaicha...sinchaud  
root@FRT:~# PAN_Configurator cpaichaud@ pa_rule-edit  
===== RULE-EDIT UTILITY =====  
PAN Rule: William Tian, Greg Rogusky  
===== "in" is missing from arguments =====  
USAGE: php rules-edit.php in=inputfile.val out=outputfile.val location=wallfirewalldb actions=actiondnrpl ["Filter=(from has external) or (to has int)"]  
php rules-edit.php listactions : list supported actions  
php rules-edit.php listfilters : list supported Filter  
php rules-edit.php help : more help messages  
Examples  
- php rules-edit.php in=ip411/292.349.58.10 location=FW-Firewall-Group out=ip411/292.349.58.10 "Filter=(to has intnet) or (to is int)"  
- php rules-edit.php in=config.val out=output.val location=day actions=securityProfileGroupSet (BlockAll)  
root@FRT:~# PAN_Configurator cpaichaud@
```

## 2. Windows

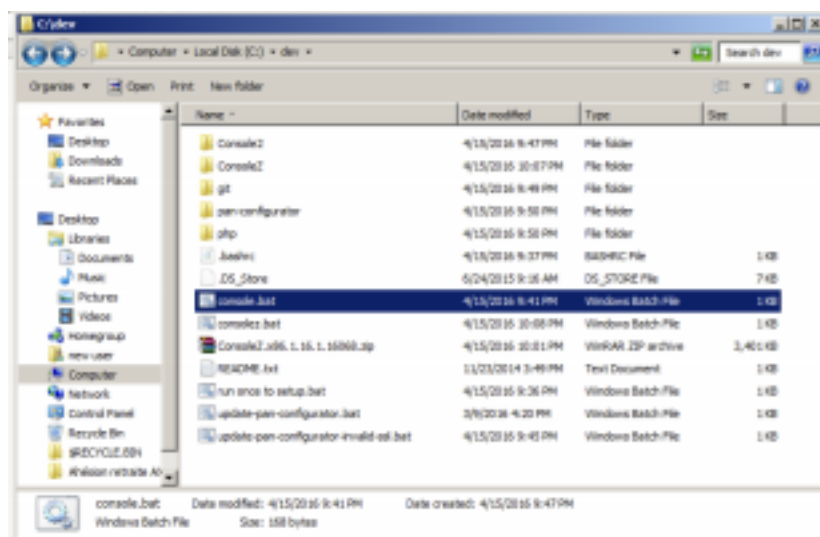
Windows users can go through the same steps as Mac OS X users or use a pre-packaged all-in-one zip file for an easy and quick setup.

## 2.1. Download and unzip package

Download URL is

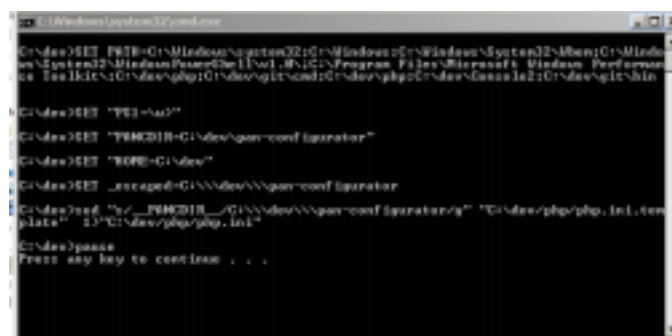
<https://github.com/PaloAltoNetworks/pan-os-php-windows-package/blob/main/dev.zip>

After unzipping (location does not matter, use anything convenient do you), you will have a folder looking like this:



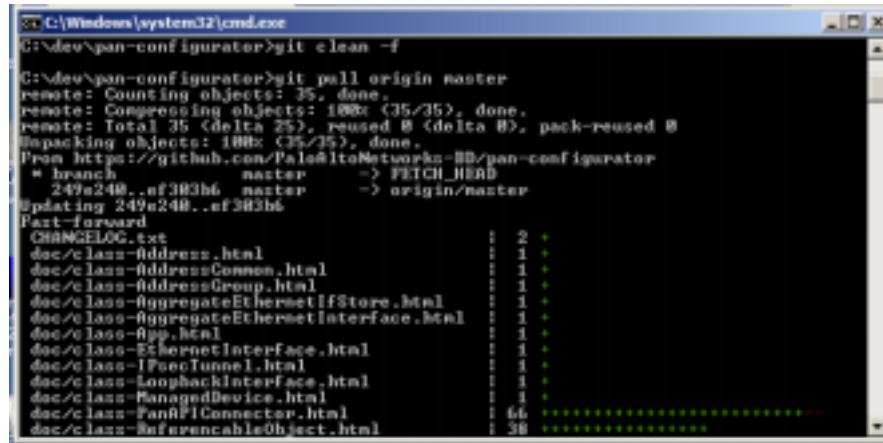
## 2.2. Execute setup script

Run script “run-once-to-setup.bat”.



## 2.3. Run PAN-OS-PHP source code update script

Run script “update-pan-os-php.bat”

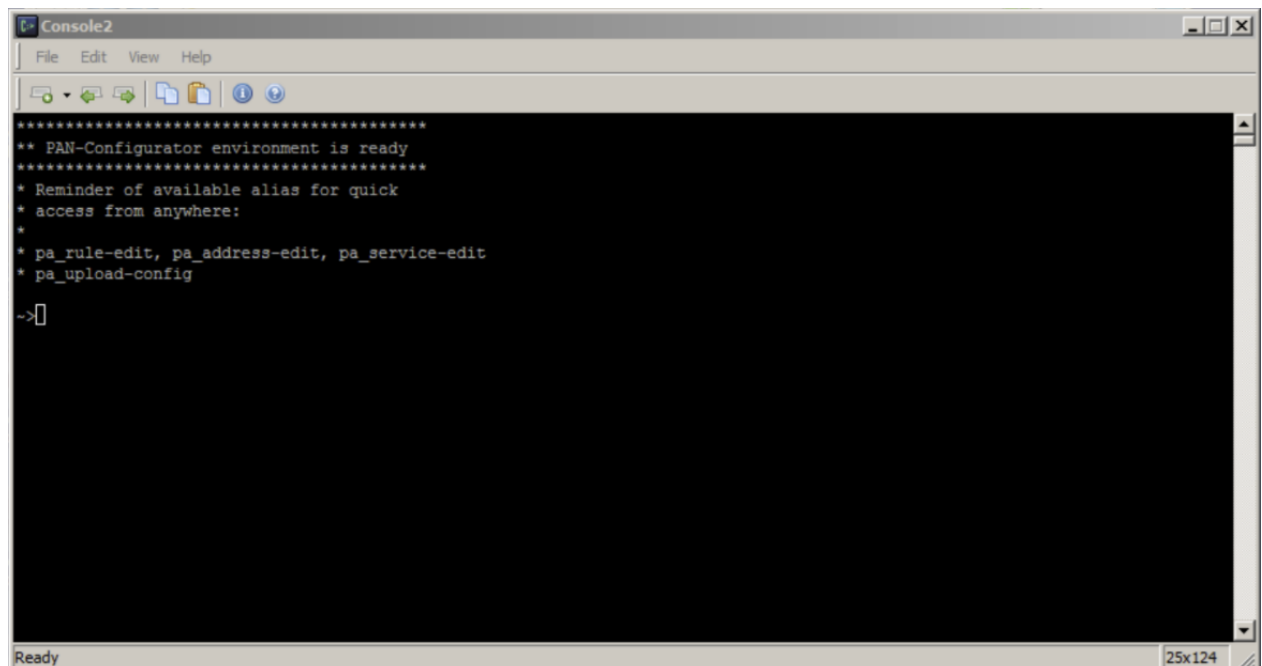


```
C:\Windows\system32\cmd.exe
G:\dev\pan-configurator>git clean -f
G:\dev\pan-configurator>git pull origin master
remote: Counting objects: 35, done.
remote: Compressing objects: 100% (35/35), done.
remote: Total 35 (delta 25), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (35/35), done.
From https://github.com/PaloAltoNetworks-88/pan-configurator
* branch .ef383b6 master -> FETCH_HEAD
Updating 249e240..ef383b6
Fast-forward
 CHANGELOG.txt | 2 +
 doc/class-Address.html | 1 +
 doc/class-AddressCommon.html | 1 +
 doc/class-AddressGroup.html | 1 +
 doc/class-AggregateEthernetIfStore.html | 1 +
 doc/class-AggregateEthernetInterface.html | 1 +
 doc/class-Arp.html | 1 +
 doc/class-EthernetInterface.html | 1 +
 doc/class-IPsecTunnel.html | 1 +
 doc/class-LoopbackInterface.html | 1 +
 doc/class-ManagedDevice.html | 1 +
 doc/class-PanAPIConnector.html | 66 +
 doc/class-ReferencableObject.html | 38 +
```

## 2.4. Test it

Windows zip package comes with a utility called Console2 which offers a good alternative to MS- DOS shell, plus it has all environment variables preset.

Run “console.bat” to start it:



```
Console2
File Edit View Help

*****
** PAN-Configurator environment is ready
*****
* Reminder of available alias for quick
* access from anywhere:
*
* pa_rule-edit, pa_address-edit, pa_service-edit
* pa_upload-config
->
```

Run the following command “pa\_rule-edit” and check that it actually works:



```
Console2
File Edit View Help

* access from anywhere:
*
* pa_rule-edit, pa_address-edit, pa_service-edit
* pa_upload-config

~>pa_rule-edit

*****
***** RULE-EDIT UTILITY *****

**ERROR** "in" is missing from arguments

USAGE: php rules-edit.php in=inputfile.xml out=outputfile.xml location=all|shared|sub actions=action1:arg1 ['filter=(from has
s external) or (to has dmz)']
php rules-edit.php listactions      : list supported actions
php rules-edit.php listfilters     : list supported filter
php rules-edit.php help            : more help messages

Examples:
- php rules-edit.php in=api://192.169.50.10 location=DMZ-Firewall-Group actions=from-add:dmz2,dmz3 'filter=(to has untrust)
or (to is.any)'
- php rules-edit.php in=config.xml out=output.xml location=any actions=securityProfile-Group-Set:BlockAll

~>

Ready 25x124
```

## 3. More documentation

- PAN-OS-PHP GitHub homepage:  
<https://github.com/PaloAltoNetworks/pan-os-php>
- PAN Live Community page for PAN-OS-PHP:  
<https://live.paloaltonetworks.com/t5/API-Articles/PAN-Configurator-scripting-library-and-utilities/ta-p/52163>
- PAN Live Community helper page for “rules-edit”:  
<https://live.paloaltonetworks.com/t5/api-articles/rules-edit-php-to-manage-edit-export-rules-from-cli/ta-p/53321>