Table des matières

1) Introduction

- Target : Configuration Pfsense for multiples Xbox One and play together online without UPnP or DMZ.
- Pfsense version : 2.4.4-p3
- Hardwares :
    - Pfsense on Qotom (from aliexpress)
    - Xbox One 1
    - Xbox One 2

2) Change default port for Xbox Live on Xbox

(https://forum.netduma.com/topic/21835-the-new-xbox-one-update-has-manual-port-selection-3074-more/)

I advise to choose different port than 3074 by default (if you have a Xbox 360 for example, because you can't change the default port on Xbox 360 instead of the Xbox One ; or if a friend come with a Xbox One you will not change this port).

For example, manual port : Xbox1 : 49366 - Xbox2 : 49568

3) Set static IP for each Xbox on DHCP server

In my configuration, the switch is DHCP server, you can use your box ISP or Pfsense (https://docs.netgate.com/pfsense/en/latest/dhcp/dhcp-server.html)

You can reboot your DHCP server and Xbox to be sure IP and port is correct !

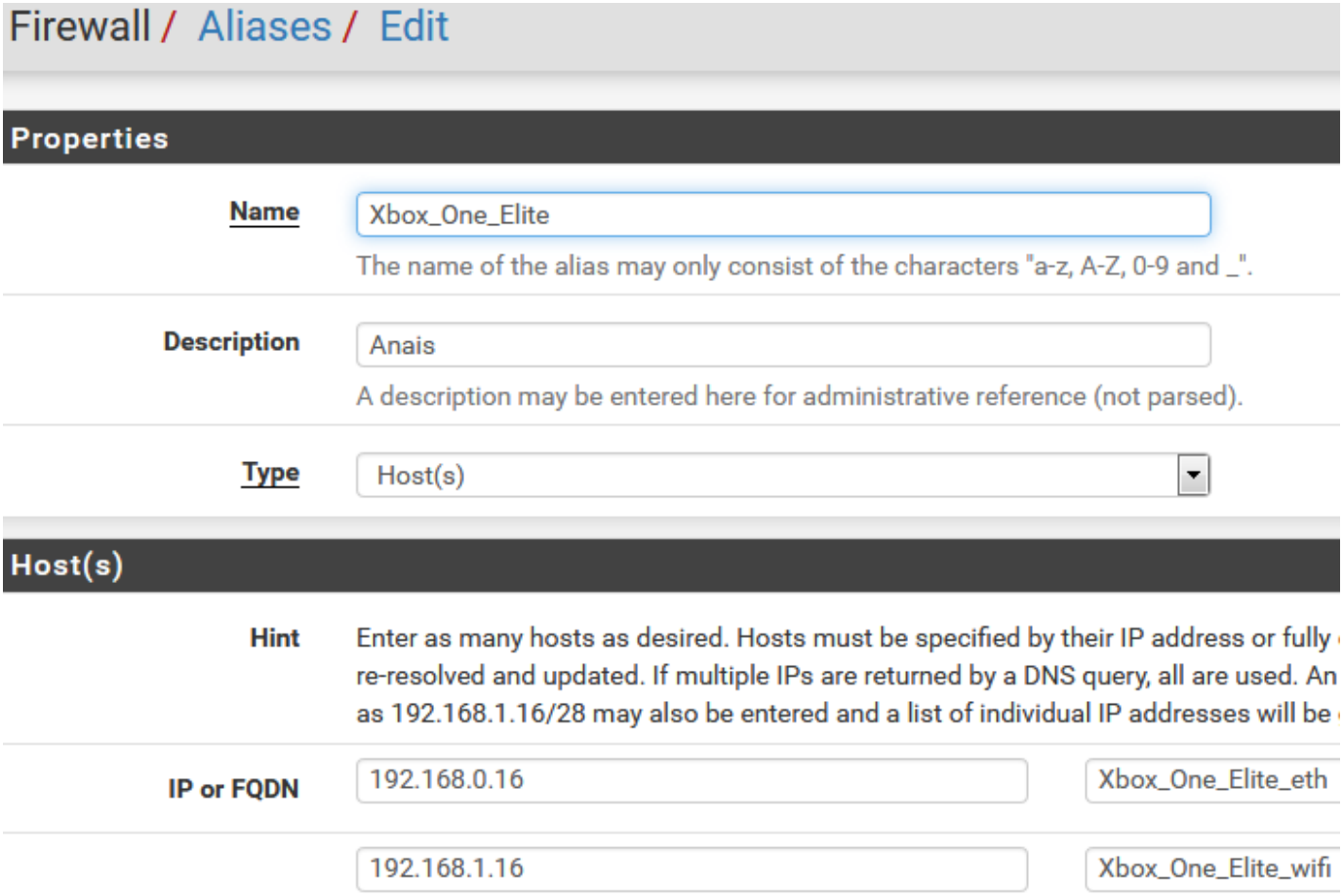
4) Create IP Alias and Port Alias on Pfsense

Make a table to summarize the information :

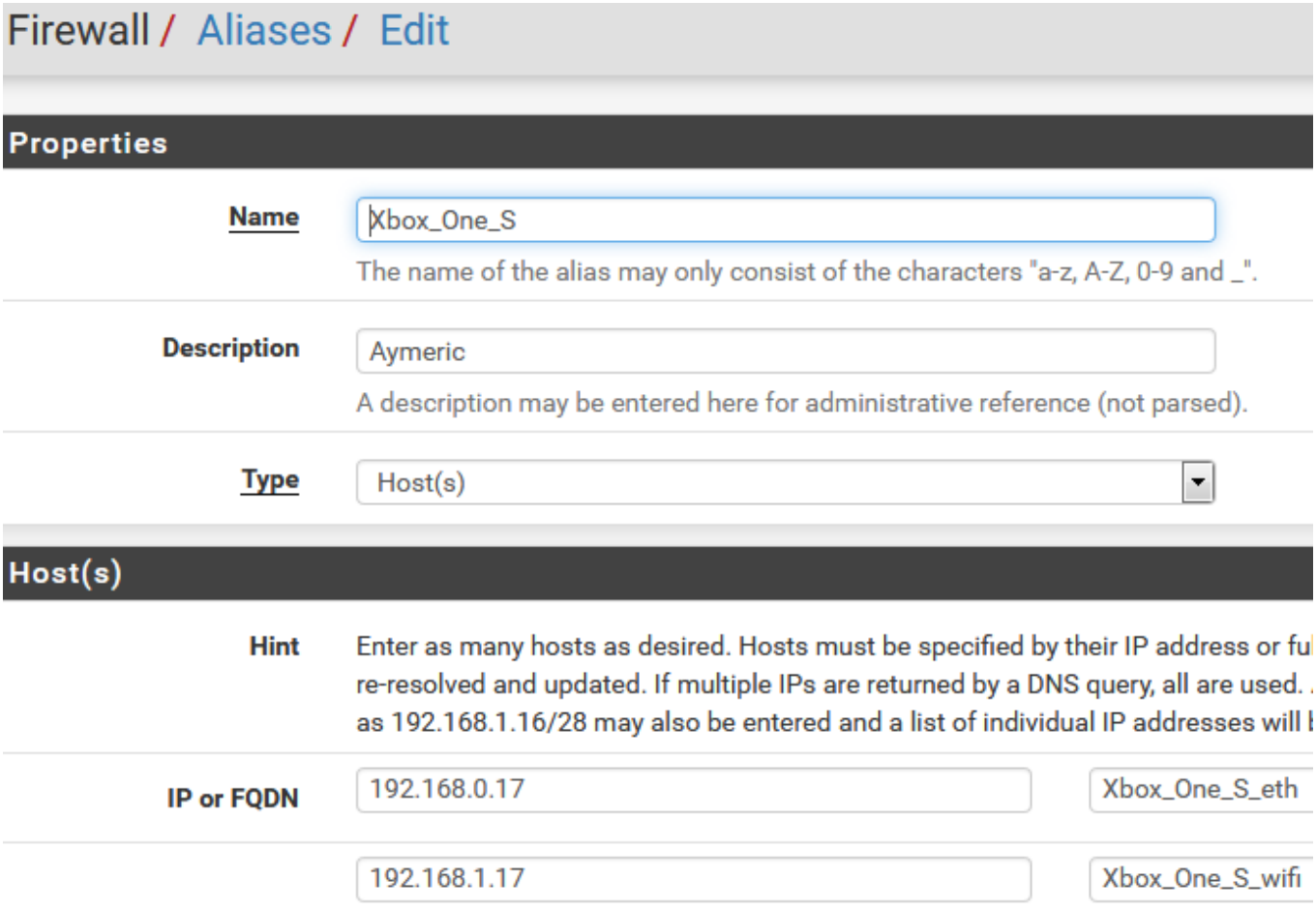
Name	Static IP	Port Xbox Live
Xbox One 1	192.168.0.16	49366
Xbox One 2	192.168.0.17	49568

Firewall -> Aliases -> IP

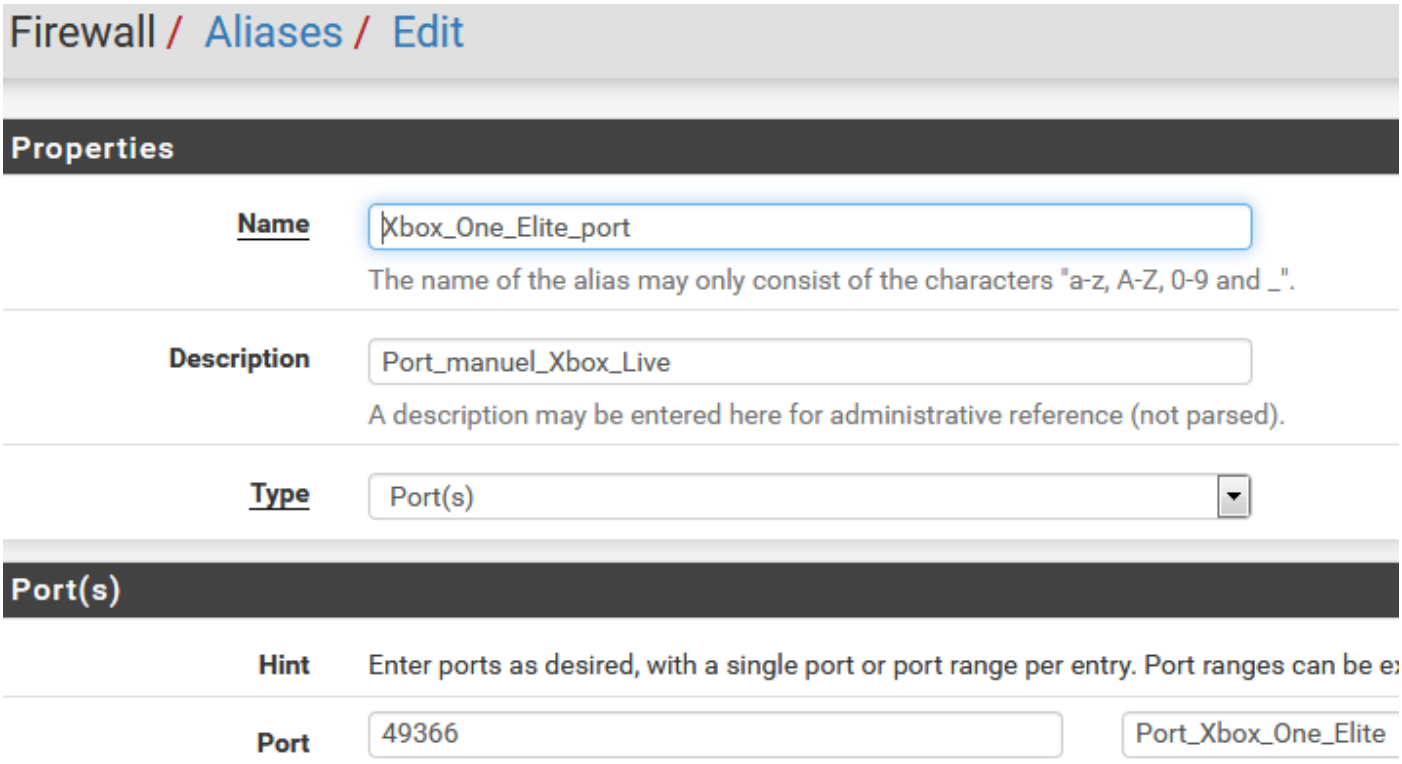
IP Xbox One n°1 :



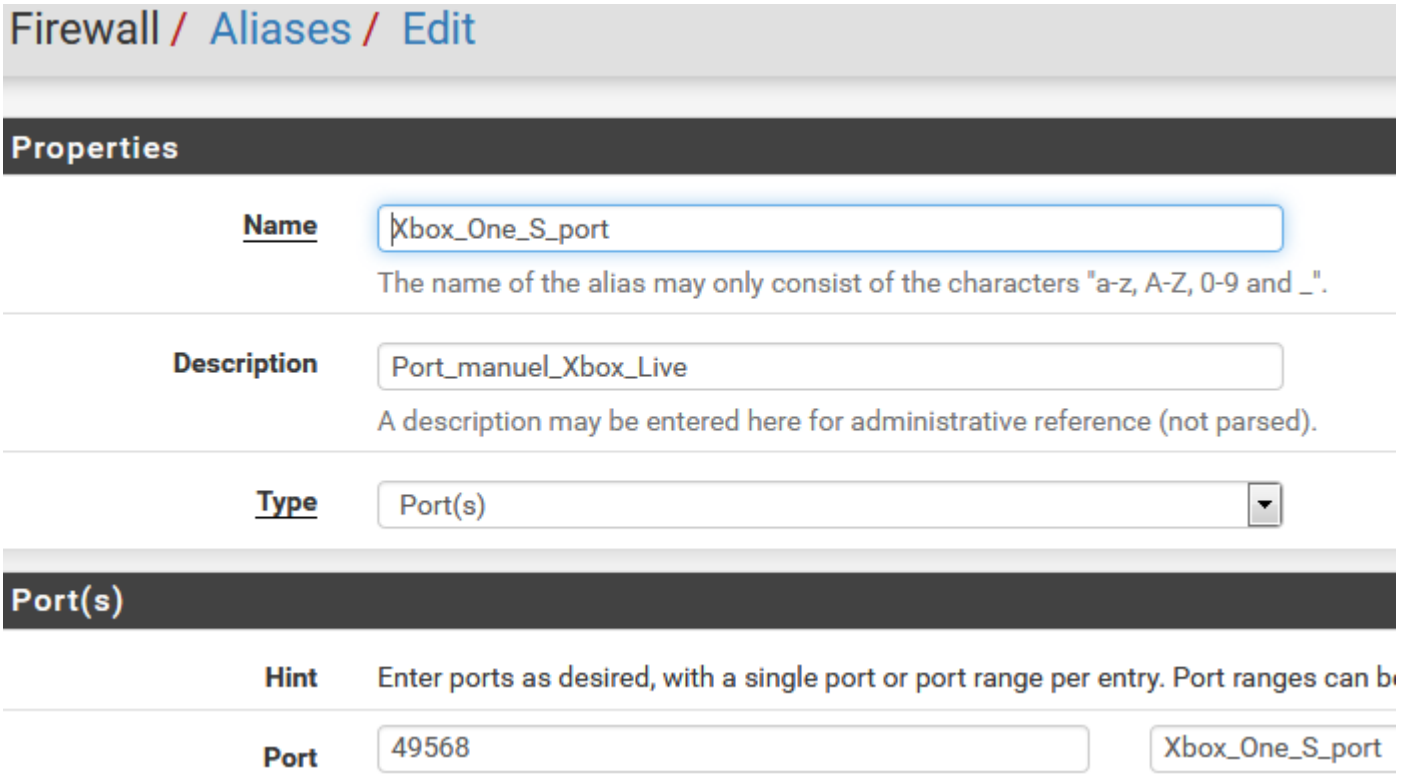
IP Xbox One n°2 :



Port Xbox One n°1 :



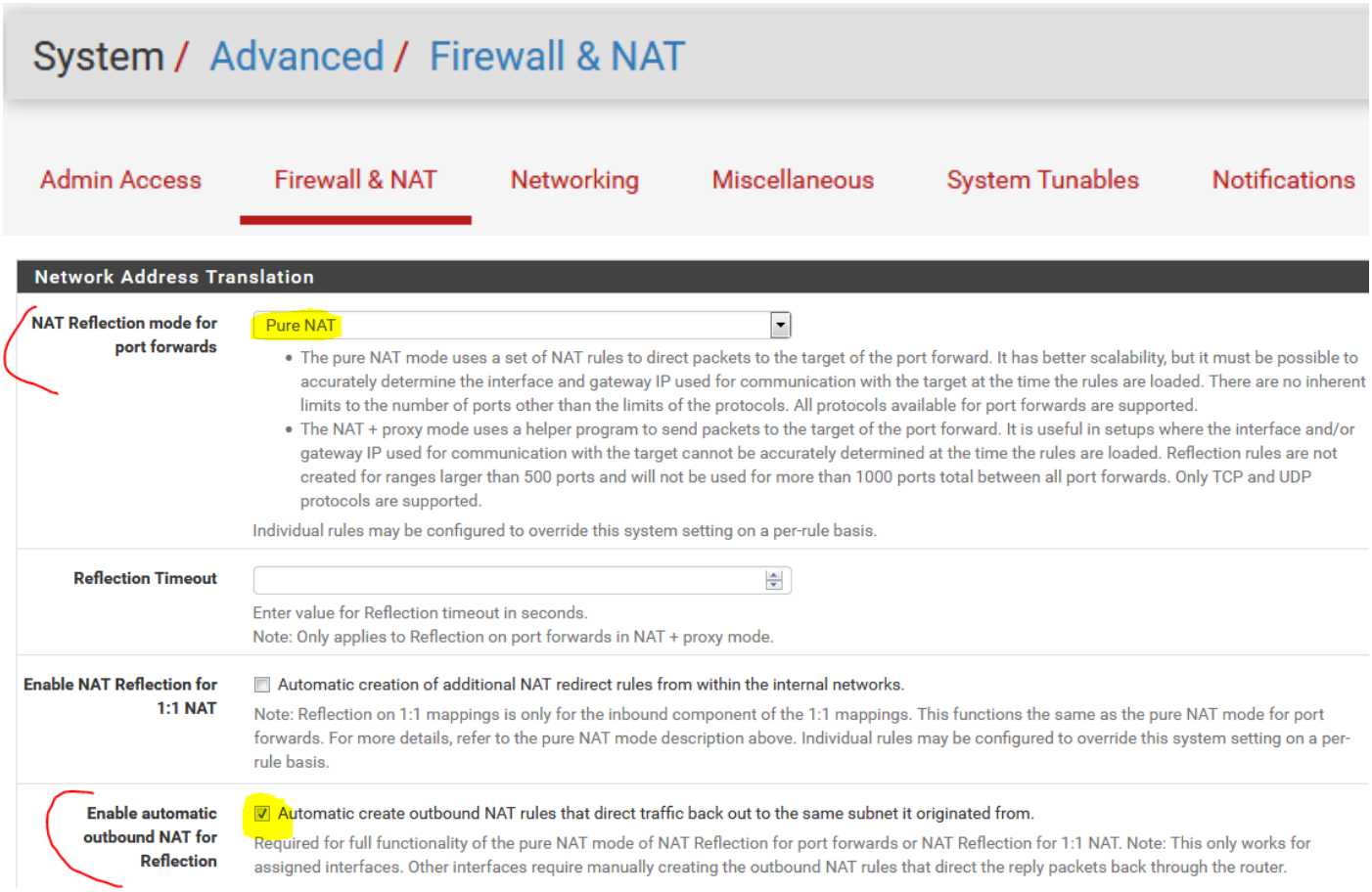
Port Xbox One n°2 :



5) Pfsense general configuration

System -> Advanced -> Firewall & NAT

- NAT Reflection mode for port forwards : **Pure NAT**
- Enable automatic outbound NAT for Reflection : **Check**

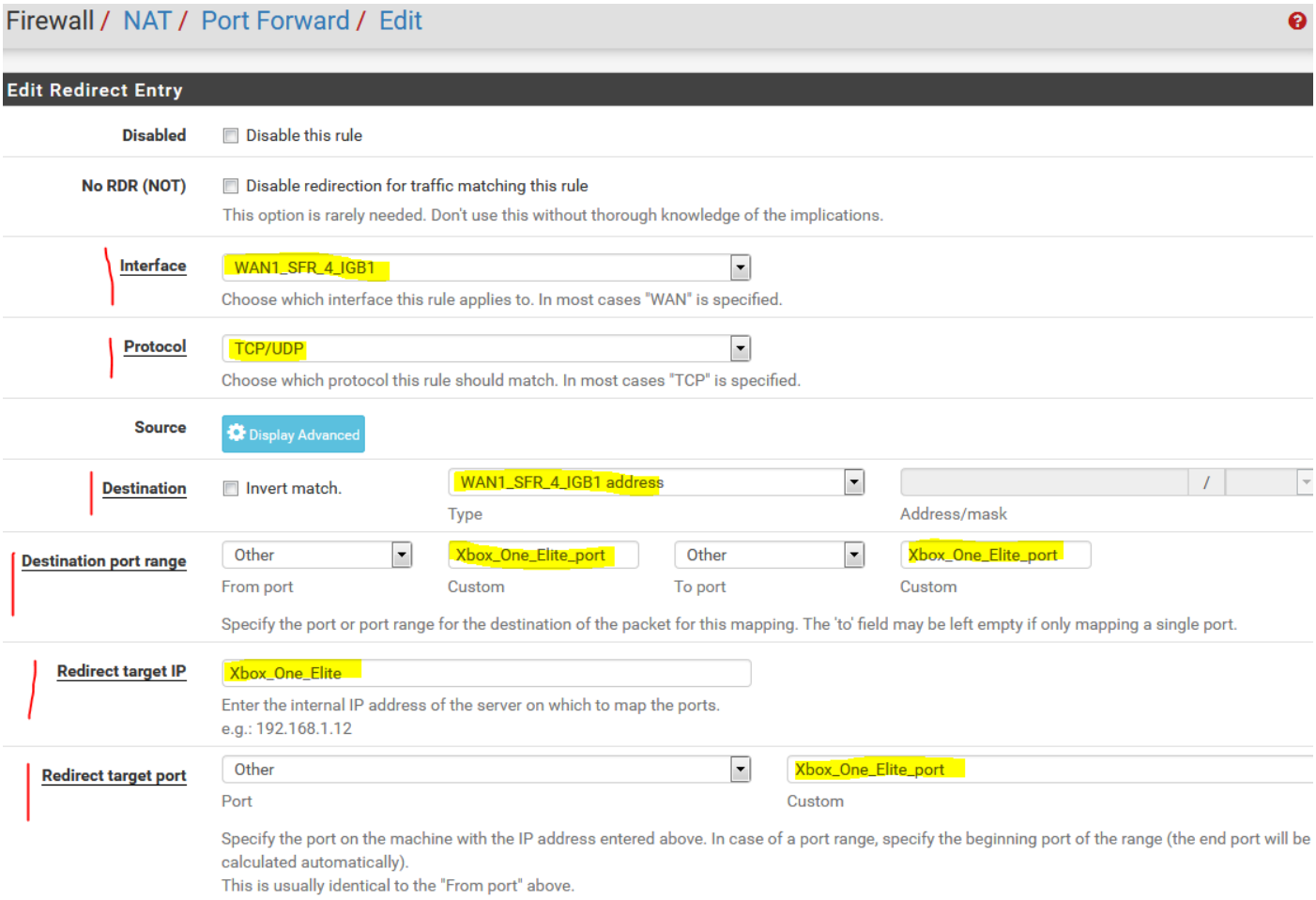


6) Port Forward

Firewall -> NAT -> Port Forward

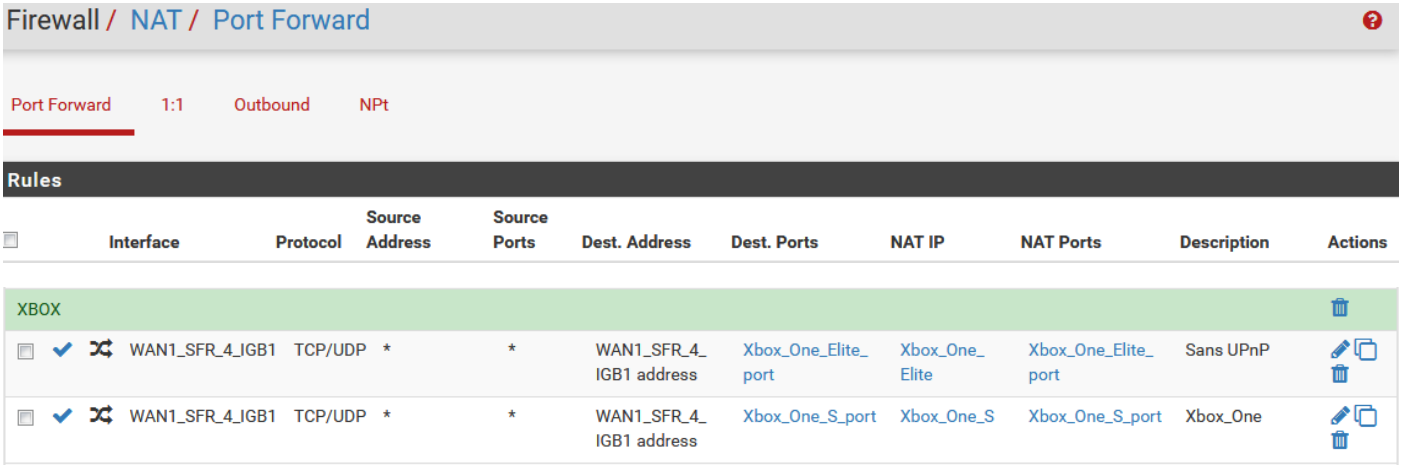
Create a new entry for Xbox One 1

- Interface : WAN
- Protocol : TCP/UDP
- Destination : WAN address
- Destination port range : choose your *Port Alias Xbox One 1*
- Redirect target IP : choose your *IP Alias Xbox One 1*
- Redirect target port : choose your *Port Alias Xbox One 1*



Repeat this operation for the second Xbox !

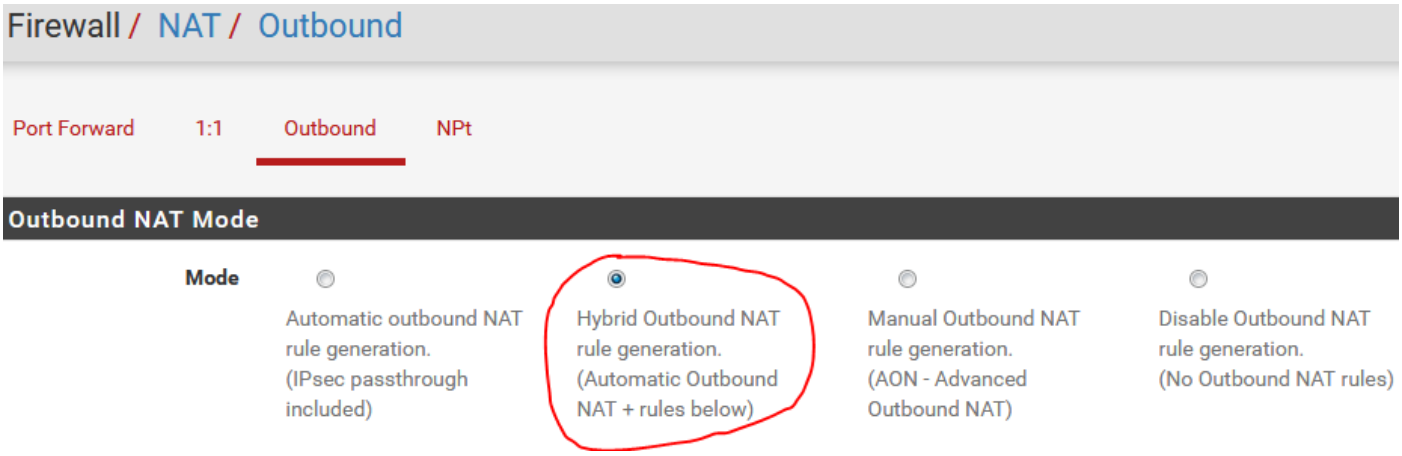
At the final :



7) NAT Outbound

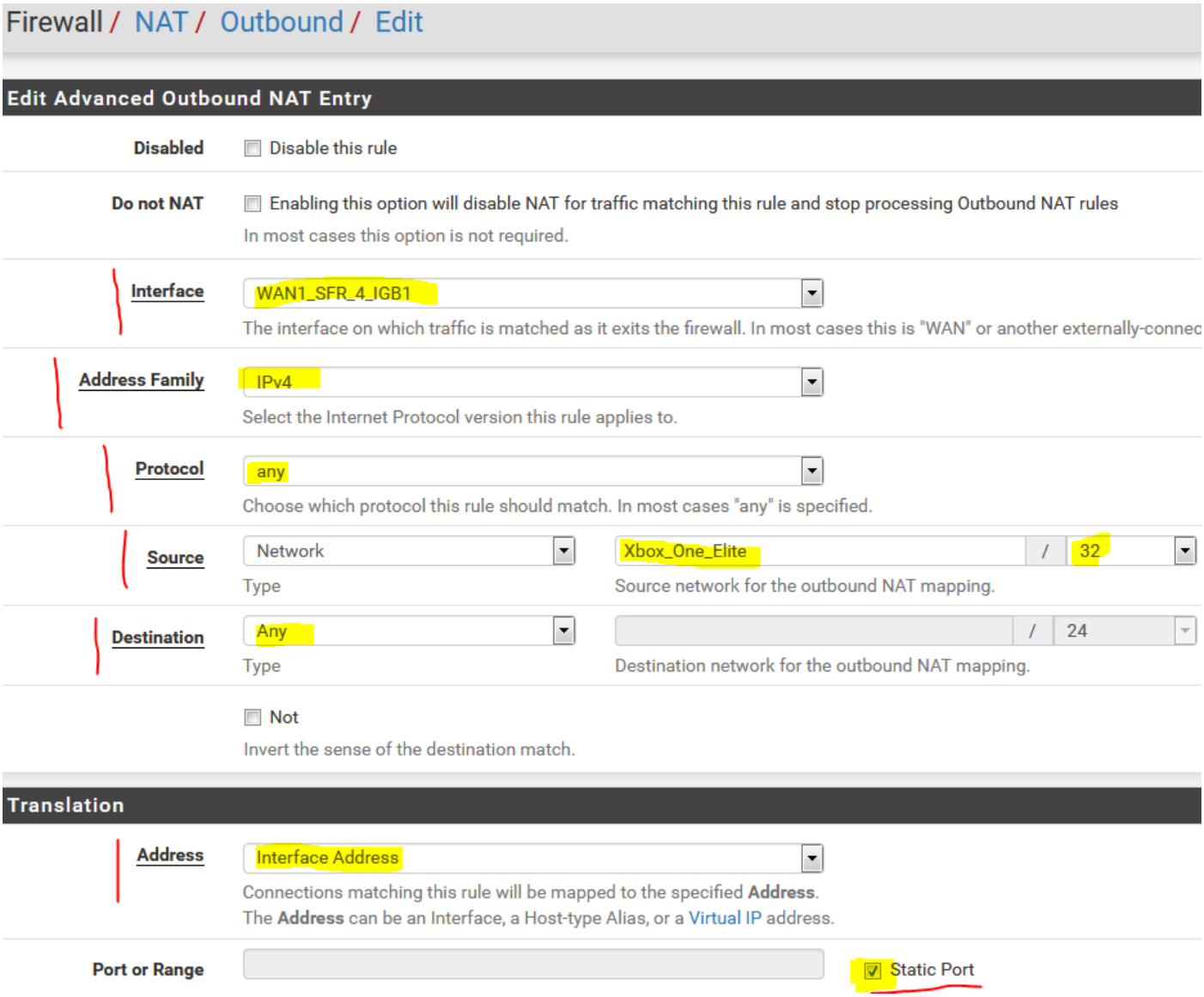
Firewall -> NAT -> Outbound

Select Mode : Hybrid Outbound NAT



Create a new entry for the Xbox One 1 :

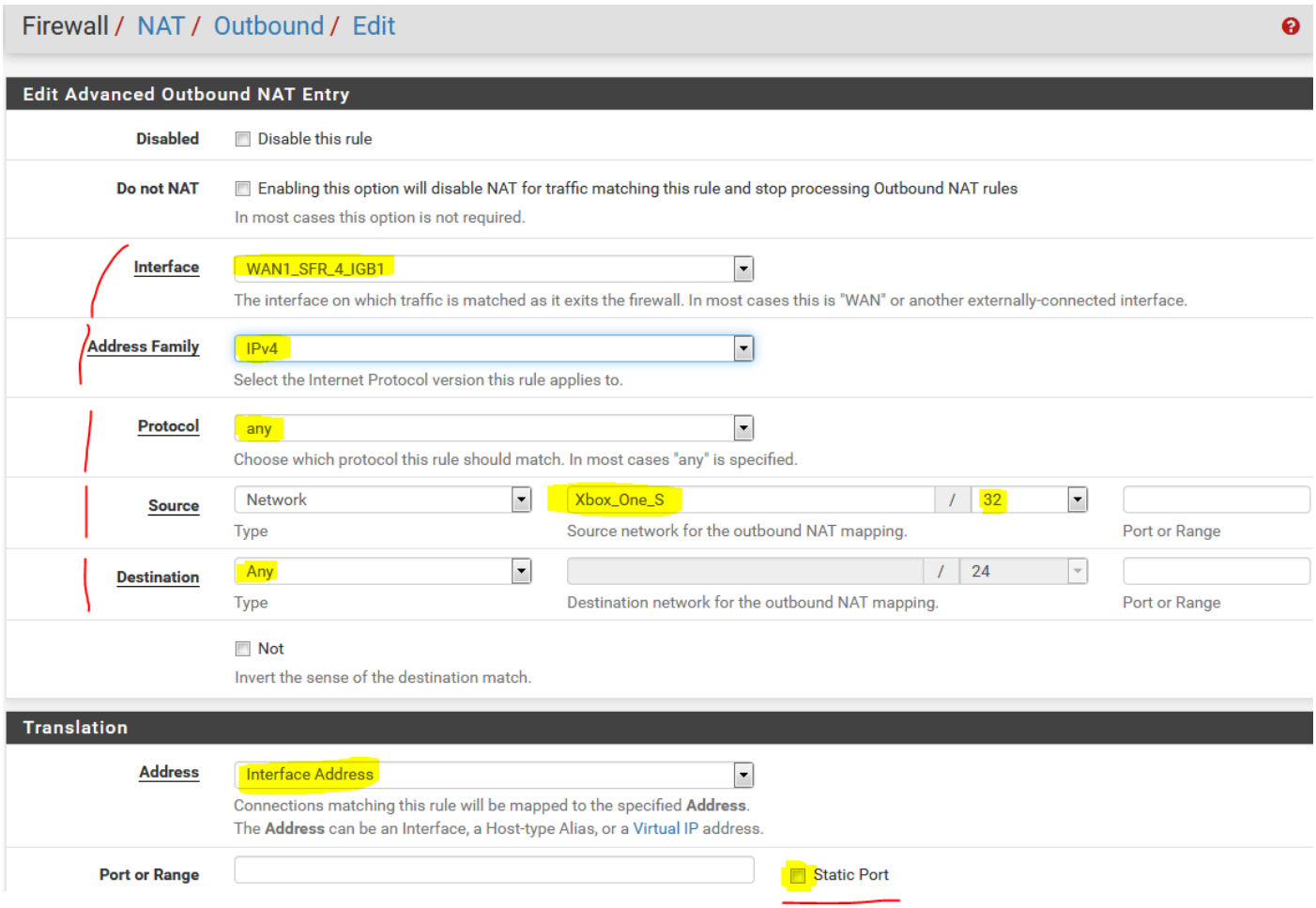
Interface : WAN
Address Family : IPv4
Protocol : any
Source : Alias for Xbox1 /32
Destination : any
Address : Interface Address
Check Static Port !!!



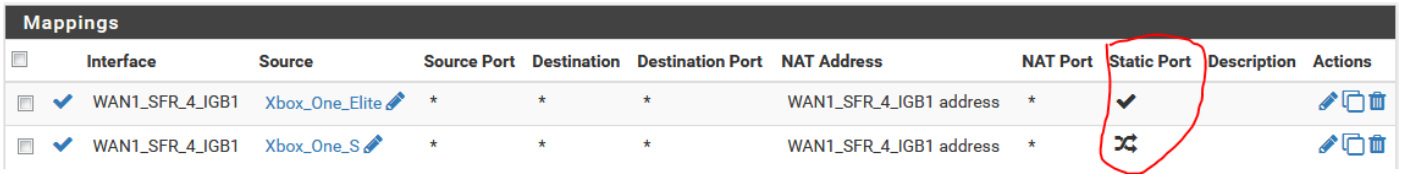
Create a new entry for the Xbox One 2 (the same thing than the first Xbox) :

The only difference is “Static Port” ; must be **Uncheck for the second Xbox One**

Interface : WAN
Address Family : IPv4
Protocol : any
Source : Alias for Xbox2 /32
Destination : any
Address : Interface Address
UNCheck Static Port !!!



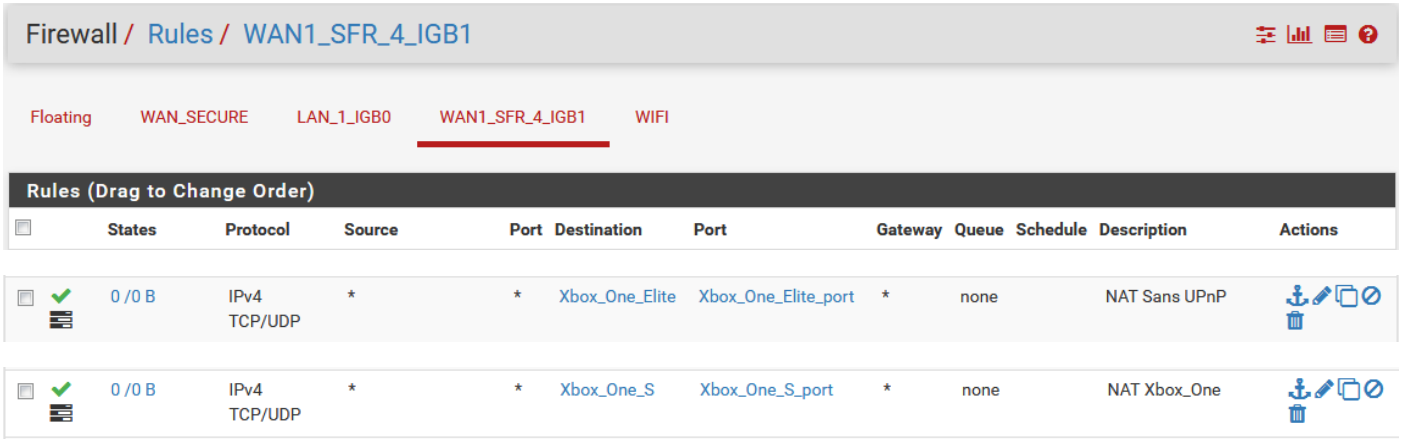
At the final :



If you check “Static Port” for the 2 Xbox, in Xbox interface your NAT will be OPEN but error to play together (Red Daed Redeption 2, Warframe, Destiny2 …)

8) Firewall Rules

Normally, the firewall rule is automatic created by the NAT rule, so you don't need to create a firewall rules.



9) Conclusion

With this configuration, you can play together online without issues at every games.
If you check Static Port for the both Xbox, the status will be OPEN but you can't play together !
I don't find the solution for NAT Open for the both Xbox AND play together (Warframe, RDR Online, Destiny 2, …)

- Xbox One 1 will appear with NAT Open
- Xbox One 2 will appear with NAT Strict

Name	Static IP	Port Xbox Live	Static Port (NAT Outbound)
Xbox One 1	192.168.0.16	49366	Check
Xbox One 2	192.168.0.17	49568	Uncheck
Xbox 360 or Xbox One friends	*192.168.0.xx*	*3074*	*Check*