

Remplacer sa box Orange par un pfSense

Introduction

Ceci est issue du forum [LaFibre](#) qui elle celle même est issue de l'énorme travail sur ce [topic](#)

Internet

Il existe deux méthodes d'attribution d'IP chez Orange :

- PPPOE : L'ancastrale méthode de chez Orange, ne supporte que l'IPv4 dynamique et est nativement compatible avec pfSense.
- DHCP : Méthode toute jeune, permet l'obtention de l'IPv6 mais non compatible nativement avec pfSense.

Bien évidemment, on va utiliser la méthode du DHCP car l'IPv6 prime.

Étape 1

Il va falloir donc modifier le fichier suivant :

- dhcp6c
- > /usr/local/sbin/dhcp6c

Cette étape sera à répéter à chaque mise à jour.

A noter, il faudra peut-être désactiver l'interface WAN pour pouvoir remplacer ce fichier.

Pour les versions inférieures à la 2.4.4, il vous faut aussi remplacer le fichier suivant :

- dhclient
- > /sbin/dhclient

Étape 2

Ensuite nous allons avoir à déclarer sur l'interface reliée à l'opérateur (ici em0) le VLAN 832 sans priorité.

VLAN Configuration

Parent Interface	em0 (4e:cb:e4:b2:52:a7)
Only VLAN capable interfaces will be shown.	
VLAN Tag	832
802.1Q VLAN tag (between 1 and 4094).	
VLAN Priority	0
802.1Q VLAN Priority (between 0 and 7).	
Description	VLAN internet
A group description may be entered here for administrative reference (not parsed).	

Puis de l'assigné sur l'interface WAN.

Étape 3

Il va falloir transformer son identifiant Orange en base32, pour cela il suffit de lancer le script suivant :

[fti.sh](#)

```

1.#!/bin/bash
2.
3. USERNAME=$1
4. AUTHSTRING=00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:1a:09:00:00:05:58:01:0
   3:41:01:0d:66:74:69:2f
5.
6. for (( i=0; i<#${#USERNAME}; i++ )); do
7.     HEXCHAR=$(echo -n ${USERNAME:$i:1} | od -An -txC | xargs)
8.     AUTHSTRING=${AUTHSTRING}:${HEXCHAR}
9. done
10. echo ${AUTHSTRING}
```

avec pour argument les 7 caractères de l'identifiant Orange (après le fti/).

Étape 4

Nous allons configurer les DHCP.

Pour cela, voici la configuration standard :

General Configuration

Enable	<input checked="" type="checkbox"/> Enable interface
Description	WAN Enter a description (name) for the interface here.
IPv4 Configuration Type	DHCP
IPv6 Configuration Type	DHCPv6
MAC Address	xx:xx:xx:xx:xx:xx This field can be used to modify ("spoof") the MAC address of this interface. Enter a MAC address in the following format: xx:xxxx:xxxx or leave blank.
MTU	1500 If this field is blank, the adapter's default MTU will be used. This is typically 1500 bytes but can vary in some circumstances.
MSS	1460 If a value is entered in this field, then MSS clamping for TCP connections to the value entered above minus 40 (TCP/IP header size) will be in effect.
Speed and Duplex	Default (no preference, typically autoselect) Explicitly set speed and duplex mode for this interface. WARNING: MUST be set to autoselect (automatically negotiate speed) unless the port this interface connects to has its speed and duplex forced.

DHCP Client Configuration

Options	<input checked="" type="checkbox"/> Advanced Configuration Use advanced DHCP configuration options.	<input type="checkbox"/> Configuration Override Override the configuration from this file.
Hostname	mybox The value in this field is sent as the DHCP client identifier and hostname when requesting a DHCP lease. Some ISPs may require this (for client identification).	
Alias IPv4 address	192.168.1.100 / 24 The value in this field is used as a fixed alias IPv4 address by the DHCP client.	
Reject leases from	192.168.1.1, 192.168.1.2 To have the DHCP client reject offers from specific DHCP servers, enter their IP addresses here (separate multiple entries with a comma). This is useful for rejecting leases from cable modems that offer private IP addresses when they lose upstream sync.	
Protocol timing	Timeout: 10s, Retry: 5s, Select timeout: 10s, Reboot: 10s, Backoff cutoff: 10s, Initial interval: 10s	
Presets	<input type="radio"/> FreeBSD default <input type="radio"/> Clear <input checked="" type="radio"/> pfSense Default <input type="radio"/> Saved Cfg The values in these fields are DHCP protocol timings used when requesting a lease. See here for more information	

Lease Requirements and Requests

Send options	dhcp-class-identifier "sagem",user-class "+FSVDSL_livebox.Internet.softathome.Livebox4",fc3118-auth 00:00:00:00:00:00:00:00:00:00:00:00 The values in this field are DHCP options to be sent when requesting a DHCP lease. [option declaration [...]] Value Substitutions: (interface), (hostname), (mac_addr_asciiCD), (mac_addr_hexCD) Where C is U(pper) or L(lower) Case, and D is ":". Delimiter (space, colon, hyphen, or period) (omitted for none). Some ISPs may require certain options be or not be sent.
Request options	subnet-mask,broadcast-address,dhcp-lease-time,dhcp-renewal-time,dhcp-rebinding-time,domain-search,routers,domain-name-servers The values in this field are DHCP option 55 to be sent when requesting a DHCP lease. [option [...]] Some ISPs may require certain options be or not be requested.
Require options	vlan-pcp 6 The values in this field are DHCP options required by the client when requesting a DHCP lease. [option [...]]
Option modifiers	vlan-pcp 6 The values in this field are DHCP option modifiers applied to the obtained DHCP lease. [modifier option declaration [...]] modifiers: (default, supersede, prepend, append) See here for more information

DHCPv6 Client Configuration

Options	<input checked="" type="checkbox"/> Advanced Configuration Use advanced DHCPv6 configuration options.	<input type="checkbox"/> Configuration Override Override the configuration from this file.
Use IPv4 connectivity as parent interface	<input type="checkbox"/> Request a IPv6 prefix/information through the IPv4 connectivity link	
Request only an IPv6 prefix	<input type="checkbox"/> Only request an IPv6 prefix, do not request an IPv6 address	
DHCPv6 Prefix Delegation size	None The value in this field is the delegated prefix length provided by the DHCPv6 server. Normally specified by the ISP.	
Send IPv6 prefix hint	<input type="checkbox"/> Send an IPv6 prefix hint to indicate the desired prefix size for delegation	
Debug	<input type="checkbox"/> Start DHCP6 client in debug mode	
Do not wait for a RA	<input checked="" type="checkbox"/> Required by some ISPs, especially those not using PPPoE	
Do not allow PD/address release	<input type="checkbox"/> dhcp6c will send a release to the ISP on exit, some ISPs then release the allocated address or prefix. This option prevents that signal ever being sent	
DHCP6 VLAN Priority	<input type="checkbox"/> Enable dhcpc6 VLAN Priority tagging Background (Bk, 0) Choose 802.1p priority to set.	

Advanced DHCP6 Client Configuration

Information only	<input type="checkbox"/> Exchange Information Only Only exchange informational configuration parameters with servers.
Send options	ia-pd 0, raw-default 15 00:2b:46:53:56:44:53:4c:5f:6c:69:76:65:62:6f:78:2e:49:6e:74:65:72:6e:65:74:2e:73:f1:66:74:61:74:68:6f:6d:65:2e DHCP send options to be sent when requesting a DHCP lease. [option declaration [...]] Value Substitutions: (interface), (hostname), (mac_addr_asciiCD), (mac_addr_hexCD) Where C is U(pper) or L(lower) Case, and D is ":". Delimiter (space, colon, hyphen, or period) (omitted for none). Some DHCP services may require certain options be or not be sent.
Request Options	Request options to be sent when requesting a DHCP lease. [option [...]] Some DHCP services may require certain options be or not be requested.
Scripts	Absolute path to a script invoked on certain conditions including when a reply message is received. [filename]/.../[filename].ext]
Identity Association Statement	<input type="checkbox"/> Non-Temporary Address Allocation id-assoc na ID IPv6 address pltime vltme <input checked="" type="checkbox"/> Prefix Delegation 0 id-assoc pd ID IPv6 prefix pltime vltme
Prefix interface statement	0 Prefix Interface sla-id 8 sla-len
Prefix Interface	LAN Select the interface on which to apply the prefix delegation.
Authentication statement	Authname Protocol Algorithm RDM
Keyinfo statement	Keyname Realm KeyID Secret Expire

Reserved Networks

Block private networks and loopback addresses	<input checked="" type="checkbox"/> Blocks traffic from IP addresses that are reserved for private networks per RFC 1918 (10/8, 172.16/12, 192.168/16) and unique local addresses per RFC 4193 (fc00::/7) as well as loopback addresses (127/8). This option should generally be turned on, unless this network interface resides in such a private address space.
Block bogon networks	<input checked="" type="checkbox"/> Blocks traffic from reserved IP addresses (but not RFC 1918) or not yet assigned by IANA. Bogons are prefixes that should never appear in the Internet routing table, and so should not appear as the source address in any packets received. Note: The update frequency can be changed under System > Advanced, Firewall & NAT settings.

Avec dans le **Send Options** IPv4 :

dans le **Request Options IPv4** :

subnet-mask, broadcast-address, dhcp-lease-time, dhcp-renewal-time, dhcp-rebinding-time, domain-search, routers, domain-name-servers, rfc3118-auth

et dans le **Send Options** IPv6 :

A noter que le

Vous devriez recevoir une IPv4 et un /56 IPv6.

Étape 5

Il faudra ajouter la route suivante pour pouvoir profiter de l'IPv6 :

Edit Gateway	
Disabled	<input type="checkbox"/> Disable this gateway Set this option to disable this gateway without removing it from the list.
Interface	WAN
Choose which interface this gateway applies to.	
Address Family	IPv6
Choose the Internet Protocol this gateway uses.	
Name	WAN_V6
Gateway name	
Gateway	fe80::ba0:bab%em0.832
Gateway IP address	
Default Gateway	<input checked="" type="checkbox"/> This will select the above gateway as the default gateway.
Gateway Monitoring	<input type="checkbox"/> Disable Gateway Monitoring This will consider this gateway as always being up.
Gateway Action	<input type="checkbox"/> Disable Gateway Monitoring Action No action will be taken on gateway events. The gateway is always considered up.
Monitor IP	
Enter an alternative address here to be used to monitor the link. This is used for the quality RRD graphs as well as the load balancer entries. Use this if the gateway does not respond to ICMP echo requests (pings).	
Force state	<input type="checkbox"/> Mark Gateway as Down This will force this gateway to be considered down.
Description	
A description may be entered here for reference (not parsed).	
<input type="button" value="Display Advanced"/>	

A noter qu'il faudra changer le nom de l'interface par la votre.

Étape 6

Vous pouvez désormais mettre des IPv6 fixe à vos adresses LAN de votre pfSense et activer le Router Advertisement.

Vous avez la complète liberté sur vos préfixes.

Télévision

Étape 1

Génération de l'identifiant :

Étape 2

Il vous faut créer les deux interfaces VLAN 838 et 840

Étape 3

Ajout du DHCP sur l'interface vlan 838 comme ceci :



avec pour options :



Étape 4

Création des règles de pare-feu



Étape 5

Création de bail statique pour le décodeur



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