



# **CONFIGURATION D'UN PORTAIL CAPTIF AVEC PFSENSE**

## **Membre du groupe**

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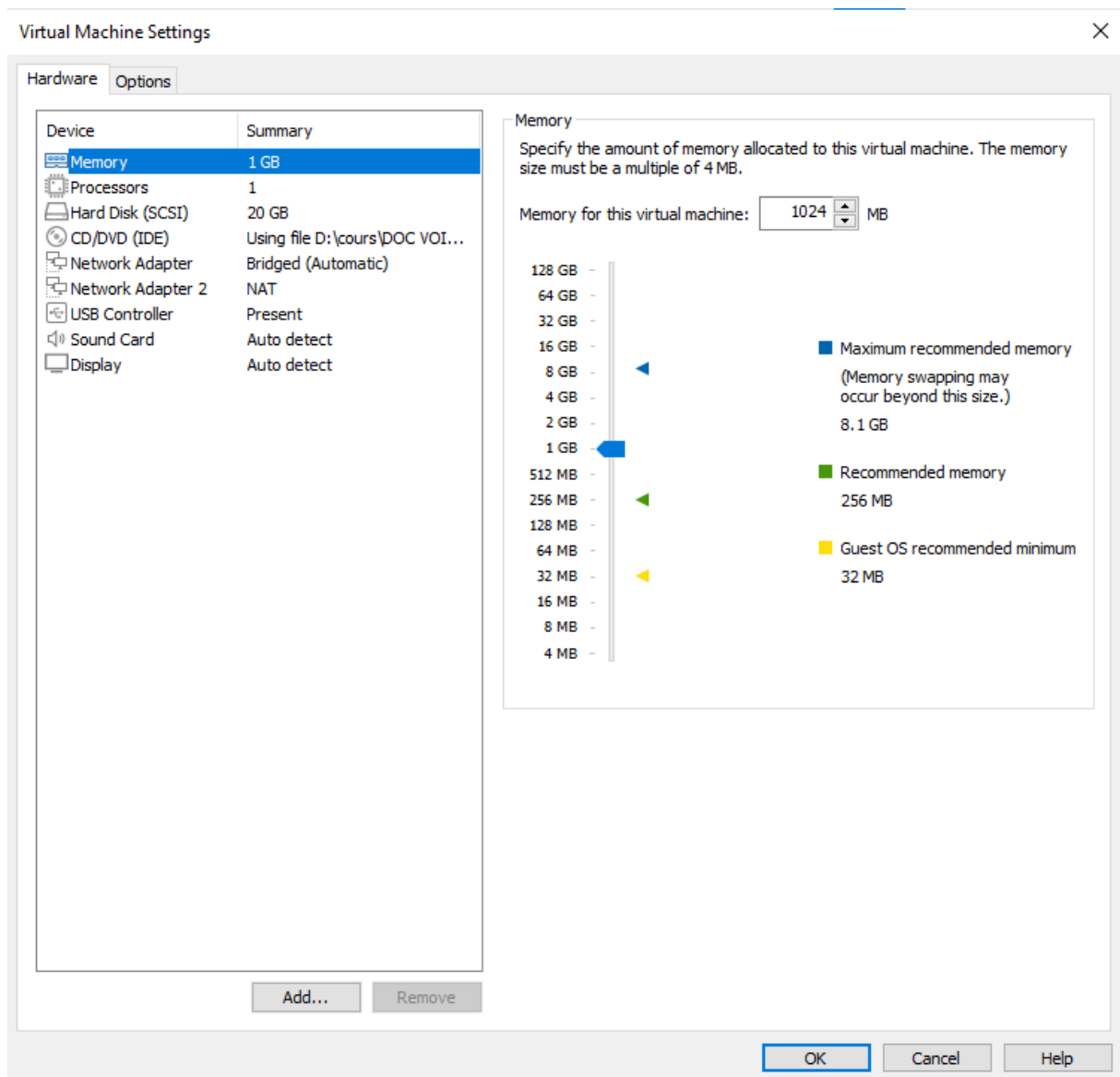
## **Professeur**

Dr GOHOU BI

Pour l'élaboration de ce projet nous utiliserons comme logiciel de virtualisation VM Ware.

Nous allons créer une machine virtuelle sur laquelle pfSense sera installé. Celle-ci doit comporter :

- 2 cartes réseaux
- 1GB de RAM
- Processeur de 1350 Mhz
- Un Disque dur d'au moins 20 GO

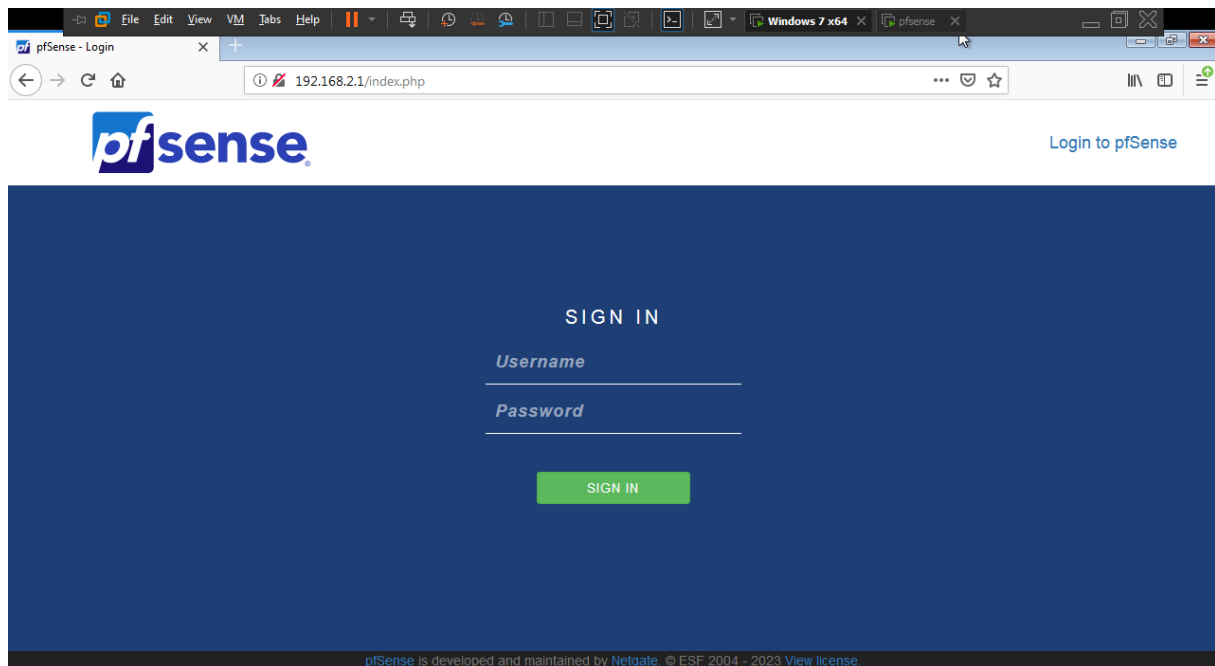


## 1- CONFIGURATION GLOBALE

Pour la configuration via l'interface web il faut connecter un PC à l'interface LAN de PfSense. Ouvrir un navigateur web et entrer l'adresse IP LAN de la machine dans la barre de d'adresse : <http://192.168.1.1> pour accéder à l'interface de connexion.

Entrer ensuite

- **Le nom de l'utilisateur par défaut : admin**
- **Le mot de passe : pfsense**



Il faudra terminer les configurations

- Nom d'hôte de l'appareil : serveur pfsense
- Domaine : upb.ci
- Serveur DNS primaire : on prendra l'adresse de notre interface WAN 192.168.126.146
- Serveur DNS secondaire : on prendra l'adresse de notre interface LAN 192.168.2.1 puis on valide

A screenshot of the 'Informations générales' (General Information) configuration page in the pfSense web interface. The breadcrumb trail at the top shows 'sorcier / Configuration de pfSense / Informations générales'. A red progress bar indicates 'Étape 2 de 9'. The page title is 'Informations générales'. Below the title, a message states: 'Sur cet écran, les paramètres généraux de pfSense seront définis.' The form contains several fields: 'Nom d'hôte' (hostname) with the value 'serveurpfsense' and an example 'myserver'; 'Domaine' (domain) with the value 'upb.ci' and an example 'mydomain.com'; 'Serveur DNS primaire' (primary DNS server) with the value '192.168.126.146'; 'Serveur DNS secondaire' (secondary DNS server) with the value '192.168.2.1'; and a 'Remplacer DNS' (replace DNS) checkbox which is checked. Below the checkbox, a note says: 'Autoriser le remplacement des serveurs DNS par DHCP / PPP sur le WAN'. At the bottom, there is a blue button labeled 'Suivant' (Next).

- Nous allons ensuite définir le mot de passe de l'administrateur WebGUI. Nous utiliserons le mot de passe « poui » puis nous validerons.

The screenshot shows the pfSense WebGUI interface. At the top, there is a navigation bar with the pfSense logo and various menu items: Système, Interfaces, Pare-feu, Prestations de service, VPN, Statut, Diagnostique, and Aider. Below the navigation bar, a red warning box states: "AVERTISSEMENT: le mot de passe du compte «admin» est défini sur la valeur par défaut. Modifiez le mot de passe dans le Gestionnaire des utilisateurs." The breadcrumb trail indicates the current location: "sorcier / Configuration de pfSense / Définir le mot de passe Admin WebGUI". A progress bar shows "Étape 6 de 9". The main heading is "Définir le mot de passe Admin WebGUI". Below this, a sub-header explains: "Sur cet écran, le mot de passe administrateur sera défini, utilisé pour accéder au WebGUI ainsi qu'aux services SSH s'il est activé." There are two password input fields: "Mot de passe d'administrateur" and "Mot de passe administrateur ENCORE". Both fields contain the text "\*\*\*\*\*". A blue button labeled "Suivant" is positioned below the second field. At the bottom of the page, a footer states: "pfSense est développé et maintenu par Netgate. © ESF 2004 - 2021 Voir la licence."

- Nous devons relancer la page afin qu'elle prenne les modifications en compte

The screenshot shows the pfSense WebGUI interface. At the top, there is a navigation bar with the pfSense logo and various menu items: Système, Interfaces, Pare-feu, Prestations de service, VPN, Statut, Diagnostique, and Aider. Below the navigation bar, a breadcrumb trail indicates the current location: "sorcier / Configuration de pfSense / Recharger la configuration". A progress bar shows "Étape 7 de 9". The main heading is "Recharger la configuration". Below this, a sub-header explains: "Cliquez sur 'Recharger' pour recharger pfSense avec de nouvelles modifications." A blue button labeled "Recharger" is positioned below the sub-header. At the bottom of the page, a footer states: "pfSense est développé et maintenu par Netgate. © ESF 2004 - 2021 Voir la licence."

Toutes nos félicitations! pfSense est maintenant configuré.

Nous vous recommandons de vérifier si des mises à jour logicielles sont disponibles. Garder vos logiciels à jour est l'une des choses les plus importantes que vous puissiez faire pour maintenir la sécurité de votre réseau.

[Rechercher des mises à jour](#)

N'oubliez pas que nous sommes là pour vous aider.

[Cliquez ici](#) pour en savoir plus sur les services de support Netgate 24/7/365.

#### Sondage auprès des utilisateurs

S'il vous plaît aider toutes les personnes impliquées dans l'amélioration et l'expansion des logiciels pfSense en prenant un moment pour répondre à cette courte enquête (toutes les réponses sont anonymes)

[Utilisateur anonyme Enquête](#)

#### Des ressources utiles.

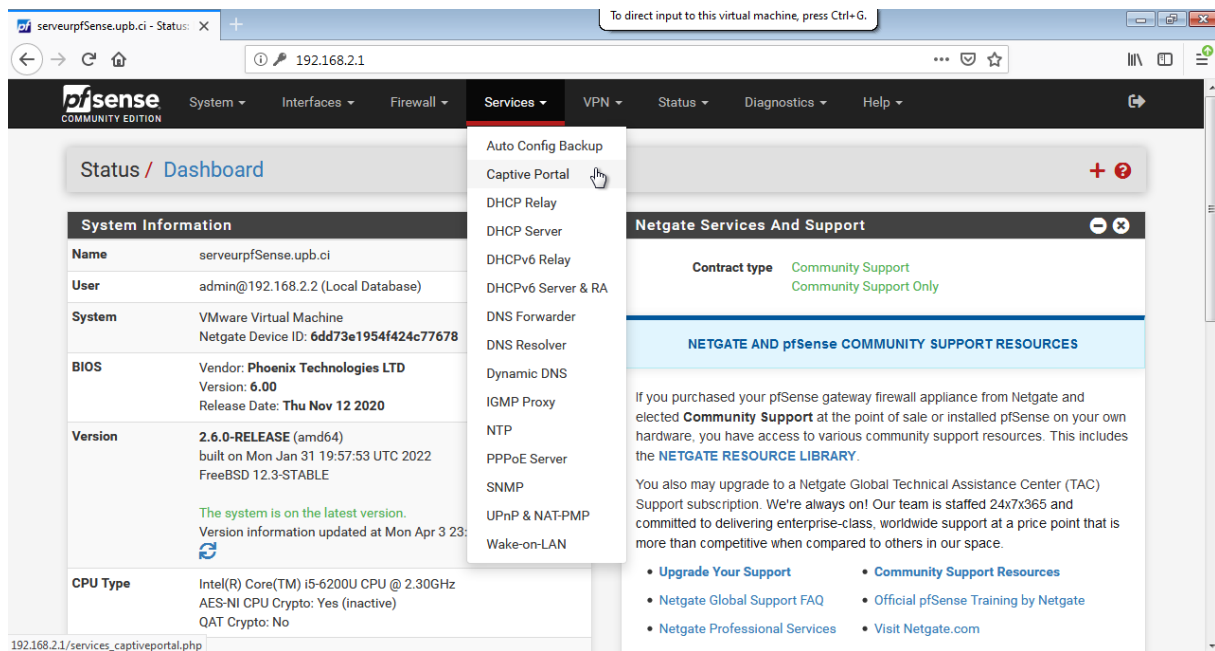
- En savoir plus sur la gamme de produits, les services et le logiciel pfSense de Netgate sur notre [site Web](#)
- Pour en savoir plus sur les appliances Netgate et d'autres offres, [visitez notre boutique](#)
- Rejoignez la communauté pfSense. Visitez notre [forum](#)
- Abonnez-vous à notre [newsletter](#) pour en savoir plus sur les produits, les annonces de logiciels et les offres spéciales.

[Finir](#)

## Nous pouvons à présent configurer le portail captif

## 2- CONFIGURATION DU PORTAIL CAPTIF

- Sélectionner services puis captive portal





- Cliquer sur add  
Mettre le nom de la zone : upb  
Renseigner la description de la zone : Le portail captif de l'université polytechnique de de Bingerville

- Cliquer sur enregistrer continuer

The screenshot shows the 'Ajouter une zone de portail captif' (Add captive portal zone) form in the pfSense web interface. The breadcrumb trail is 'Prestations de service / Portail captif / Ajouter une zone'. The form has two main sections: 'Nom de zone' (Zone name) and 'Description de la zone' (Zone description). The 'Nom de zone' field contains 'upb' and has a note: 'Nom de la zone. Ne peut contenir que des lettres, des chiffres et des traits de soulignement (\_) et ne peut pas commencer par un chiffre.' The 'Description de la zone' field contains 'Le portail captif de l'université Polytechnique de Bingerville' and has a note: 'Une description peut être saisie ici pour référence administrative (non analysée)'. At the bottom of the form is a blue button labeled 'Enregistrer continuer'.

The screenshot shows the 'Captive Portal Zones' table in the pfSense web interface. The breadcrumb trail is 'Services / Captive Portal'. The table has five columns: 'Zone', 'Interfaces', 'Number of users', 'Description', and 'Actions'. There is one row with the following data:

Zone	Interfaces	Number of users	Description	Actions
upb	LAN	1	Le portail captif de l'université Polytechnique Bingerville	 

Below the table is a green button labeled '+ Add'. The bottom of the screenshot shows the Windows 7 taskbar with the time 23:40 and date 03/04/2023.

- Cliquer sur le bic dans la colonne action

Renseigner le nom du portail captif et sa description

Activer « Enable Captive portal »

Sélectionner l'interface « LAN »|

Maximum concurrent connections : 5

Idle timeout :10

Services / Captive Portal / upb / Configuration

Configuration
MACs
Allowed IP Addresses
Allowed Hostnames
Vouchers
High Availability
File Manager

Captive Portal Configuration

Enable	<input checked="" type="checkbox"/> Enable Captive Portal
Description	<input type="text" value="Le portail captif de l'université Polytechnique Bingerville"/> <p>A description may be entered here for administrative reference (not parsed).</p>
Interfaces	<div> <div>WAN</div> <div>LAN</div> </div> <p>Select the interface(s) to enable for captive portal.</p>
Maximum concurrent connections	<input type="text" value="5"/> <p>Limits the number of concurrent connections to the captive portal HTTP(S) server. This does not set how many users can be logged in to the captive portal, but rather how many connections a single IP can establish to the portal web server.</p>
Idle timeout (Minutes)	<input type="text" value="10"/> <p>Clients will be disconnected after this amount of inactivity. They may log in again immediately, though. Leave this field blank for no idle timeout.</p>
Hard timeout (Minutes)	<input type="text"/> <p>Clients will be disconnected after this amount of time, regardless of activity. They may log in again immediately, though. Leave this field blank for no</p>

- Traffic quota « 1024 »
- Activer « Enable loughout popup Windows »

Traffic quota (Megabytes)	<input type="text" value="1024"/> <p>Clients will be disconnected after exceeding this amount of traffic, inclusive of both downloads and uploads. They may log in again immediately, though. Leave this field blank for no traffic quota.</p>
Pass-through credits per MAC address.	<input type="text"/> <p>Allows passing through the captive portal without authentication a limited number of times per MAC address. Once used up, the client can only log in with valid credentials until the waiting period specified below has expired. Recommended to set a hard timeout and/or idle timeout when using this for it to be effective.</p>
Waiting period to restore pass-through credits. (Hours)	<input type="text"/> <p>Clients will have their available pass-through credits restored to the original count after this amount of time since using the first one. This must be above 0 hours if pass-through credits are enabled.</p>
Reset waiting period	<input type="checkbox"/> Enable waiting period reset on attempted access <p>If enabled, the waiting period is reset to the original duration if access is attempted when all pass-through credits have already been exhausted.</p>
Logout popup window	<input checked="" type="checkbox"/> Enable logout popup window <p>If enabled, a popup window will appear when clients are allowed through the captive portal. This allows clients to explicitly disconnect themselves before the idle or hard timeout occurs.</p>
Pre-authentication redirect URL	<input type="text"/> <p>Set a default redirection URL. Visitors will be redirected to this URL after authentication only if the captive portal doesn't know where to redirect them. This field will be accessible through \$PORTAL_REDIRURL\$ variable in captiveportal's HTML pages.</p>
After authentication Redirection URL	<input type="text"/> <p>Set a forced redirection URL. Clients will be redirected to this URL instead of the one they initially tried to access after they've authenticated.</p>

- Activer « preserve connected users accross reboot »
- Concurrent user logins « Multiple »

<b>Preserve users database</b>	<input checked="" type="checkbox"/> Preserve connected users across reboot If enabled, connected users won't be disconnected during a pfSense reboot.
<b>Concurrent user logins</b>	Multiple <input type="button" value="v"/> Disabled: Do not allow concurrent logins per username or voucher. Multiple: No restrictions to the number of logins per username or voucher will be applied. Last login: Only the most recent login per username or voucher will be granted. Previous logins will be disconnected. First login: Only the first login per username or voucher will be granted. Further login attempts using the username or voucher will not be possible while an initial user is already active.
<b>MAC filtering</b>	<input type="checkbox"/> Disable MAC filtering If enabled no attempts will be made to ensure that the MAC address of clients stays the same while they are logged in. This is required when the MAC address of the client cannot be determined (usually because there are routers between pfSense and the clients). If this is enabled, RADIUS MAC authentication cannot be used.
<b>Pass-through MAC Auto Entry</b>	<input type="checkbox"/> Enable Pass-through MAC automatic additions When enabled, a MAC passthrough entry is automatically added after the user has successfully authenticated. Users of that MAC address will never have to authenticate again. To remove the passthrough MAC entry either log in and remove it manually from the <a href="#">MAC tab</a> or send a POST from another system. If this is enabled, the logout window will not be shown.
<b>Per-user bandwidth restriction</b>	<input type="checkbox"/> Enable per-user bandwidth restriction
<b>Use custom captive portal page</b>	<input type="checkbox"/> Enable to use a custom captive portal login page If set a portal.html page must be created and uploaded. If unchecked the default template will be used

-Display custom logo image : cocher la case « Enable to use a custom uploaded logo »

Captive Portal Login Page	
<b>Display custom logo image</b>	<input checked="" type="checkbox"/> Enable to use a custom uploaded logo
<b>Logo Image</b>	<div> <input type="button" value="Parcourir..."/> <span>Aucun fichier sélectionné.</span> </div> <p>Add a logo for use in the default portal login screen. File will be renamed captiveportal-logo.* The image will be resized to fit within the given area, It can be of any image type: .png, .jpg, .svg <b>This image will not be stored in the config.</b> The default logo will be used if no custom image is present.</p>
<b>Display custom background image</b>	<input type="checkbox"/> Enable to use a custom uploaded background image
<b>Background Image</b>	<div> <input type="button" value="Parcourir..."/> <span>Aucun fichier sélectionné.</span> </div> <p>Add a background image for use in the default portal login screen. File will be renamed captiveportal-background.* The background image will fill the screen. <b>This image will not be stored in the config.</b> The default background image will be used if no custom background is present.</p>
<b>Terms and Conditions</b>	<div> <p>En utilisant notre portail captif, vous vous conformez aux contraintes et règles des politiques de sécurité.</p> </div> <p>Copy and paste terms and conditions for use in the captive portal. HTML tags will be stripped out</p>
Authentication	

### 3- AUTHENTIFICATION

- Choisir Use an Authentication backend dans la case Authentication Method
- Cliquer sur local database
- Cocher Allow only users /group with Captive Portal Login privilege set



Authentication

Authentication Method

Use an Authentication backend

Select an Authentication Method to use for this zone. One method must be selected.

- "Authentication backend" will force the login page to be displayed and will authenticate users using their login and password, or using vouchers.

- "None" method will force the login page to be displayed but will accept any visitor that clicks the "submit" button.

- "RADIUS MAC Authentication" method will try to authenticate devices automatically with their MAC address without displaying any login page.

Authentication Server

Local Database

You can add a remote authentication server in the [User Manager](#).

Vouchers could also be used, please go to the [Vouchers Page](#) to enable them.

Secondary authentication Server

Local Database

You can optionally select a second set of servers to to authenticate users. Users will then be able to login using separated HTML inputs.

This setting is useful if you want to provide multiple authentication method to your users. If you don't need multiple authentication method, then leave this setting empty.

Reauthenticate Users

☐ Reauthenticate connected users every minute

If reauthentication is enabled, request are made to the server for each user that is logged in every minute. If an access denied is received for a user, that user is disconnected from the captive portal immediately. Reauthentication requires user credentials to be cached in the captive portal database while a user is logged in; The cached credentials are necessary for the portal to perform automatic reauthentication requests.

Local Authentication Privileges









☒ Allow only users/groups with "Captive portal login" privilege set

## 4- CONFIGURATION DES GROUPES ET DES UTILISATEURS

- Sélectionner System puis User Manager

The screenshot shows the Mikrotik WinBox interface. The top navigation bar includes 'System', 'Interfaces', 'Firewall', 'Services', 'VPN', 'Status', 'Diagnostics', and 'Help'. The 'System' menu is open, displaying options: Advanced, Cert. Manager, General Setup, High Avail. Sync, Logout (admin), Package Manager, Register, Routing, Setup Wizard, Update, and User Manager. The 'User Manager' option is highlighted by the mouse cursor. In the background, the 'Captive Portal' configuration page is visible, showing a table with columns 'Zone', 'Number of users', 'Description', and 'Actions'. The table contains one entry for 'upb' with the description 'Le portail captif de l'université Polytechnique Bingerville'. A green '+ Add' button is located at the bottom right of the table.

- Onglet Groups cliquer sur add

System / User Manager / Groups <span>?</span>			
Users	Groups	Settings	Authentication Servers
Groups			
Group name	Description	Member Count	Actions
admins	System Administrators	1	 
all	All Users	2	 
upb	Groupe des membres de l'UPB	1	  
			 Add

Renseigner le nom du groupe et la description

Cliquer sur Save

Users	Groups	Settings	Authentication Servers
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**Group Properties**

**Group name**

**Scope** 

Warning: Changing this setting may affect the local groups file, in which case a reboot may be required for the changes to take effect.

**Description** 

Group description, for administrative information only

**Group membership**

Not members

Members

>> Move to "Members"
















<< Move to "Not members"

Hold down CTRL (PC)/COMMAND (Mac) key to select multiple items.

- Cliquer sur add puis sur la rubrique Assigned Privileges

<b>Assigned privileges</b>	<div> User - Services: Captive Portal login  WebCfg - Services: Captive Portal  WebCfg - Services: Captive Portal Voucher Rolls  WebCfg - Services: Captive Portal Vouchers  WebCfg - Services: Captive Portal Zones  WebCfg - Services: Captive Portal: Allowed Hostnames  WebCfg - Services: Captive Portal: Allowed IPs  WebCfg - Services: Captive Portal: Edit Allowed Hostnames  WebCfg - Services: Captive Portal: Edit Allowed IPs  WebCfg - Services: Captive Portal: Edit MAC Addresses  WebCfg - Services: Captive Portal: Edit Zones  WebCfg - Services: Captive Portal: File Manager  WebCfg - Services: Captive Portal: Mac Addresses  WebCfg - Status: Captive Portal  WebCfg - Status: Captive Portal Voucher Rolls  WebCfg - Status: Captive Portal Vouchers  WebCfg - Status: Captive Portal: Expire Vouchers  WebCfg - Status: Captive Portal: Test Vouchers </div> <p>Hold down CTRL (PC)/COMMAND (Mac) key to select multiple items.</p>
<b>Filter</b>	<input type="text" value="captive portal"/> <p>Show only the choices containing this term</p>
<b>Privilege information</b>	<p>The following privileges effectively give the user administrator-level access because the user gains access to execute general commands, edit system files, modify users, change passwords or similar:</p> <p>User - System: Proxy files (root)</p>

- Sélectionner dans la liste des WebCfg-System : User Manager Puis cliquer sur Save

WebCfg - Services: Captive Portal Vouchers	Allow access to the 'Services: Captive Portal Vouchers' page.	
WebCfg - Services: Captive Portal Zones	Allow access to the 'Services: Captive Portal Zones' page.	
WebCfg - Services: Captive Portal: Allowed Hostnames	Allow access to the 'Services: Captive Portal: Allowed Hostnames' page.	
WebCfg - Services: Captive Portal: Allowed IPs	Allow access to the 'Services: Captive Portal: Allowed IPs' page.	
WebCfg - Services: Captive Portal: Edit Allowed Hostnames	Allow access to the 'Services: Captive Portal: Edit Allowed Hostnames' page.	
WebCfg - Services: Captive Portal: Edit Allowed IPs	Allow access to the 'Services: Captive Portal: Edit Allowed IPs' page.	
WebCfg - Services: Captive Portal: Edit MAC Addresses	Allow access to the 'Services: Captive Portal: Edit MAC Addresses' page.	
WebCfg - Services: Captive Portal: Edit Zones	Allow access to the 'Services: Captive Portal: Edit Zones' page.	
WebCfg - Services: Captive Portal: File Manager	Allow access to the 'Services: Captive Portal: File Manager' page.	
WebCfg - Services: Captive Portal: Mac Addresses	Allow access to the 'Services: Captive Portal: Mac Addresses' page.	
WebCfg - Status: Captive Portal	Allow access to the 'Status: Captive Portal' page.	
WebCfg - Status: Captive Portal Voucher Rolls	Allow access to the 'Status: Captive Portal Voucher Rolls' page.	
WebCfg - Status: Captive Portal Vouchers	Allow access to the 'Status: Captive Portal Vouchers' page.	
WebCfg - Status: Captive Portal: Expire Vouchers	Allow access to the 'Status: Captive Portal: Expire Vouchers' page.	
WebCfg - Status: Captive Portal: Test Vouchers	Allow access to the 'Status: Captive Portal: Test Vouchers' page.	

Revenir dans la rubrique Assigned Privileges et cliquer sur add sélectionner WebCfg-Status : Captive Portal puis cliquer sur Save

Vérifier les droits puis cliquer sur Save

- Aller dans l'onglet Users Properties cliquer sur add entrer
  - Un nom d'utilisateur : jean
  - Un mot de passe : poui
  - La description : poui

Sélectionner dans Groupmembership le groupe précédemment créé. Cliquer sur « Move to Member of list puis sur Save

User Properties

Defined by

USER

Disabled

☐ This user cannot login

Username

jean

Password

••••

••••

Full name

jean eudes

User's full name, for administrative information only

Expiration date

Leave blank if the account shouldn't expire, otherwise enter the expiration date as MM/DD/YYYY

Custom Settings

☐ Use individual customized GUI options and dashboard layout for this user.

Group membership

admins

Not member of

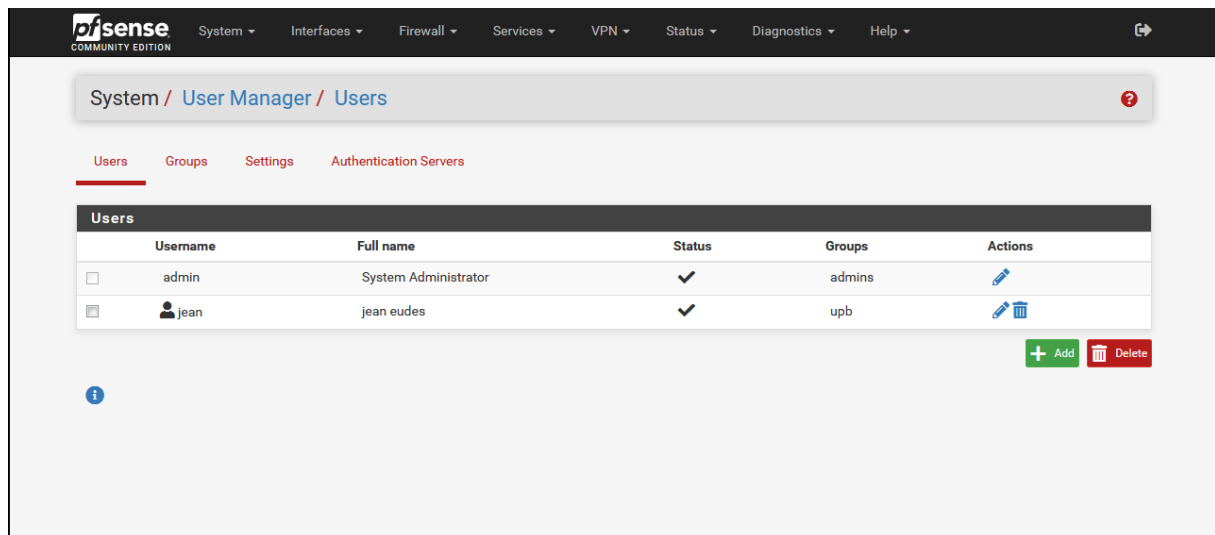
» Move to "Member of" list

upb

Member of

« Move to "Not member of" list

Hold down CTRL (PC)/COMMAND (Mac) key to select multiple items.



Ensuite aller sur un navigateur et entrer upb.ci

- Cliquer sur afficher la page de connexion du réseau
- Vous aurez accès à la page d'authentification vous devriez renseigner les champs et vous aurez accès à la page d'upb.ci

