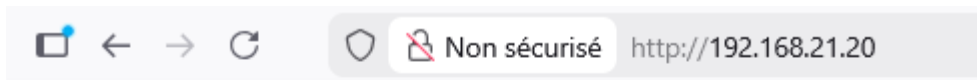


```
root@AitBrahimDeb12Load:~# apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.65-1~deb12u1).
0 upgraded, 0 newly installed, 0 to remove and 108 not upgraded.
root@AitBrahimDeb12Load:~#
```

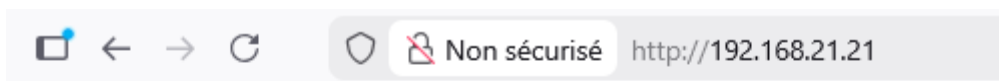
allez dans `cd /var /www /html /index.php`

```
<?php
$ip_serveur = $_SERVER['SERVER_ADDR'];
?>

<!DOCTYPE html>
<html lang="fr">
<head>
  <meta charset="UTF-8">
</head>
<body>
  <h1>
    Je suis serveur Apache 1
    <br>
    j'ai l'adresse ipv4 <span class="ip-address"><?php echo $ip_serveur; ?></spa>
  </h1>
</body>
</html>
```



**Je suis serveur Apache 1**  
**j'ai l'adresse ipv4 192.168.21.20**

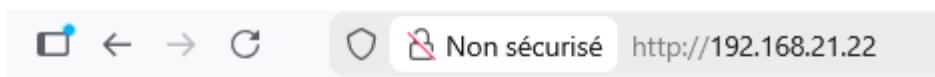


**Je suis serveur Apache 2**  
**j'ai l'adresse ipv4 192.168.21.21**

```
root@AitBrahimDeb12LoadBalancer:~# a2enmod proxy
Enabling module proxy.
To activate the new configuration, you need to run:
  systemctl restart apache2
root@AitBrahimDeb12LoadBalancer:~# a2enmod proxy_http
Considering dependency proxy for proxy_http:
Module proxy already enabled
Enabling module proxy_http.
To activate the new configuration, you need to run:
  systemctl restart apache2
root@AitBrahimDeb12LoadBalancer:~# a2enmod proxy_balancer
Considering dependency proxy for proxy_balancer:
Module proxy already enabled
Considering dependency alias for proxy_balancer:
Module alias already enabled
Considering dependency slotmem_shm for proxy_balancer:
Enabling module slotmem_shm.
Enabling module proxy_balancer.
To activate the new configuration, you need to run:
  systemctl restart apache2
root@AitBrahimDeb12LoadBalancer:~# a2enmod slotmem_shm
Module slotmem_shm already enabled
root@AitBrahimDeb12LoadBalancer:~# systemctl restart apache2
root@AitBrahimDeb12LoadBalancer:~#
```

On créer un fichier dans `/etc/apache2/sites-available/loadbalancer.conf` contenu :

```
<Proxy "balancer://mycluster">
    BalancerMember "http://192.168.21.20:80"
    BalancerMember "http://192.168.21.21:80"
</Proxy>
ProxyPass "/" "balancer://mycluster"
ProxyPassReverse "/" "balancer://mycluster"
```



**Je suis serveur Apache 1  
j'ai l'adresse ipv4 192.168.21.20**

# Je suis serveur Apache 2 j'ai l'adresse ipv4 192.168.21.21

The screenshot shows the phpMyAdmin web interface. The browser address bar indicates the URL is http://192.168.21.23/phpmyadmin. The interface displays the 'utilisateurs' table within the 'tmp' database. A green message at the top indicates that 2 lines were displayed successfully. The SQL query shown is 'SELECT \* FROM `utilisateurs`'. Below the query, there are options for 'Tout afficher', 'Nombre de lignes' (set to 25), and 'Filtrer les lignes' (set to 'Chercher').

The table data is as follows:

	id	Nom	Prenom
<input type="checkbox"/>	1	Dupont	Jean
<input type="checkbox"/>	2	Martin	Sophie

Below the table, there are options for 'Tout cocher', 'Avec la sélection', 'Supprimer', and 'Exporter'. At the bottom, there is a section for 'Opérations sur les résultats de la requête' with options for 'Imprimer', 'Copier dans le presse-papiers', 'Exporter', 'Afficher le graphique', and 'Créer une vue'. There is also a section for 'Conservation de la requête SQL dans les signets' with a text input field for the title and a checkbox for 'Signet visible pour les autres utilisateurs'.

sur le serveurWeb1 rajouter ce code pour afficher le tableau de cette base de donnée :

```
<?php
$host = '192.168.21.23';
$db = 'tmp';
$user = 'webuser';
$password = 'admin';
$ip_serveur = $_SERVER['SERVER_ADDR'];
$results = [];
$error = null;
$dbh = null;

try {

    $dbh = new PDO("mysql:host=$host;dbname=$db;charset=utf8",
    $user, $password);
    $dbh->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);

    $sql = "SELECT id, Nom, Prenom FROM utilisateurs";
    $stmt = $dbh->query($sql);
    $results = $stmt->fetchAll(PDO::FETCH_ASSOC);

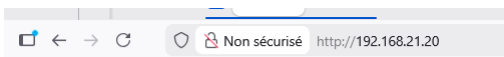
} catch (PDOException $e) {

    $error = "Erreur DB: " . $e->getMessage();
}
$dbh = null;
?>

<!DOCTYPE html>
<html lang="fr">
<head>
    <meta charset="UTF-8">
</head>
<body>

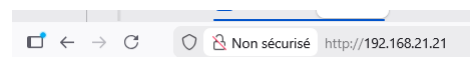
    <?php if ($error): ?>
    <p style="color:red;"><?php echo $error; ?></p>
    <?php else: ?>
    <table border="1">
        <tr><th>ID</th><th>Nom</th><th>Prénom</th></tr>
        <?php foreach ($results as $row): ?>
```

```
            <tr>
                <td><?php echo htmlspecialchars($row['id']); ?>
            </td>
                <td><?php echo
                htmlspecialchars($row['Nom']); ?></td>
                <td><?php echo
                htmlspecialchars($row['Prenom']); ?></td>
            </tr>
        <?php endforeach; ?>
        <?php if (empty($results)): ?>
        <tr><td colspan="3">Aucun utilisateur
        trouvé.</td></tr>
        <?php endif; ?>
    </table>
    <?php endif; ?>
</body>
</html>
```



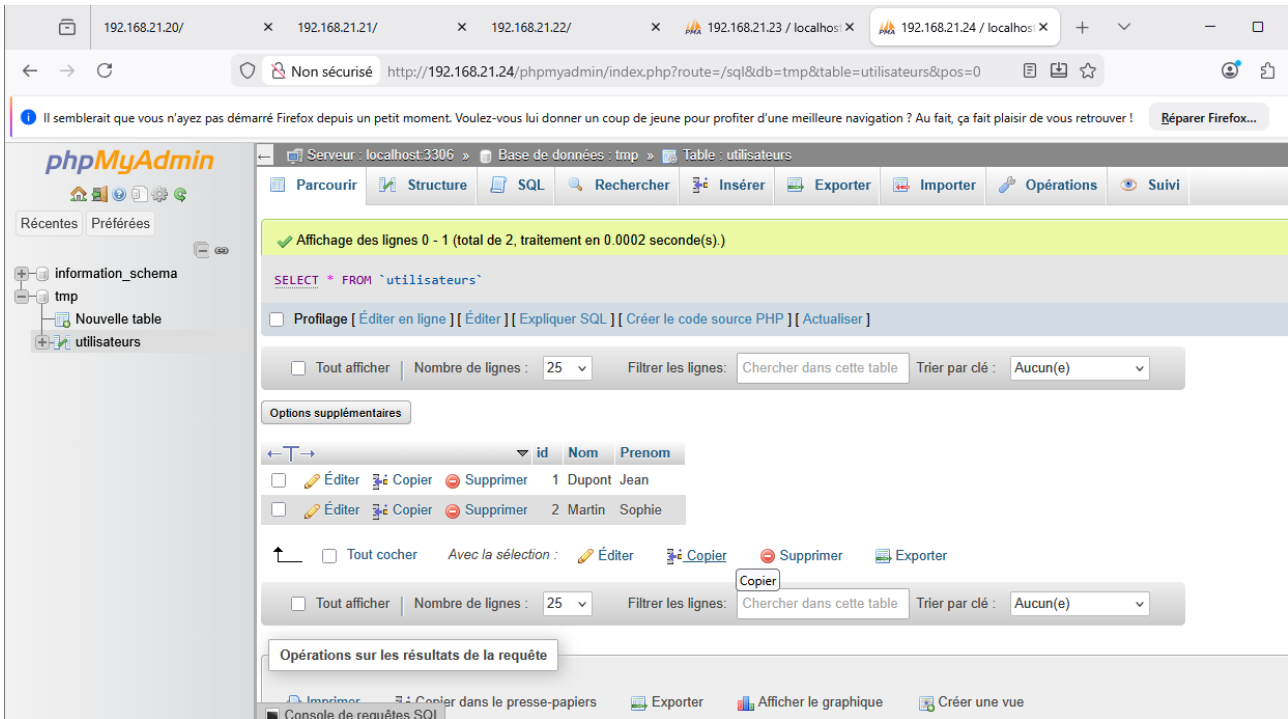
**Je suis serveur Apache 1  
j'ai l'adresse ipv4 192.168.21.20**

ID	Nom	Prénom
1	Dupont	Jean
2	Martin	Sophie



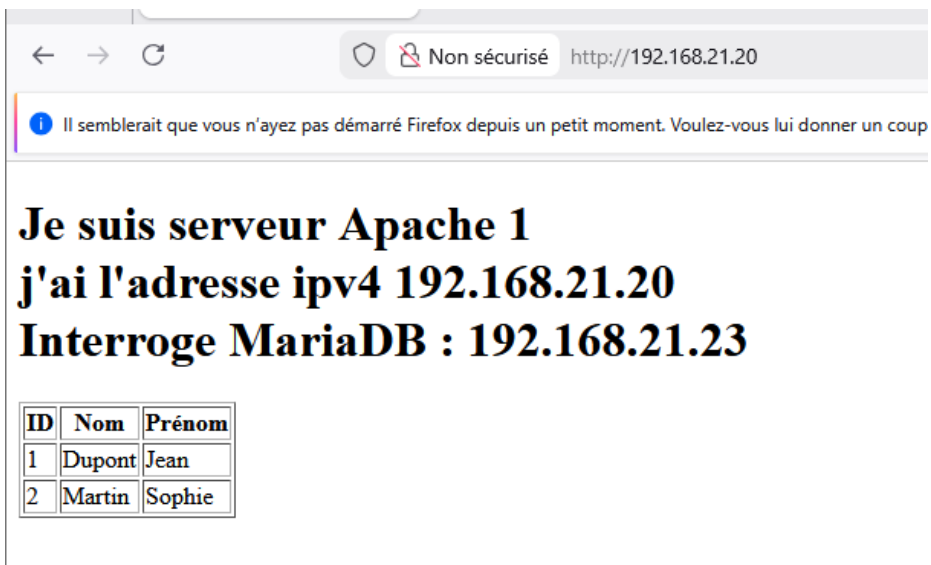
**Je suis serveur Apache 2  
j'ai l'adresse ipv4 192.168.21.21**

ID	Nom	Prénom
1	Dupont	Jean
2	Martin	Sophie



```
GNU nano 7.2                               index.php
<?php
$host = '192.168.21.24';
$db = 'tmp';
$user = 'webuser';
$pass = 'admin';

$ip_serveur = $_SERVER['SERVER_ADDR'];
$results = [];
$error = null;
$dbh = null;
```





Non sécurisé http://192.168.21.21

Il semblerait que vous n'avez pas démarré Firefox depuis un petit moment. Voulez-vous lui donner un coup de jeune pour profite

**Je suis serveur Apache 2**  
**j'ai l'adresse ipv4 192.168.21.21**  
**Interroge MariaDB : 192.168.21.24**

ID	Nom	Prénom
1	Dupont	Jean
2	Martin	Sophie