Apache y Nginx

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2º ASIR - Implantación de Sistemas Operativos
Operativos
Prometeo-Caja Mágica

1.Apache + PHP

Instalación y configuración de de apache:

Se realiza la instalación de apache con el comando sudo apt install apache2 -y


```
root@A6Alumno10:/mnt/c/Windows/System32# sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap libaprutil1t64
  liblua5.4-0 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser ufw
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap libaprutil1t64
  liblua5.4-0 ssl-cert
0 upgraded, 10 newly installed, 0 to remove and 6 not upgraded.
Need to get 2086 kB of archives.
After this operation, 8090 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libapr1t64 amd64 1.7.2-3.1ubuntu0.1 [108 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1t64 amd64 1.6.3-1.1ubuntu7 [91.9 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.3-1.1ubuntu7 [11.2 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-ldap amd64 1.6.3-1.1ubuntu7 [9116 B]
Get:5 http://archive.ubuntu.com/ubuntu noble/main amd64 liblua5.4-0 amd64 5.4.6-3build2 [166 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-bin amd64 2.4.58-1ubuntu8.8 [1331 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-data all 2.4.58-1ubuntu8.8 [163 kB]
Get:8 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-utils amd64 2.4.58-1ubuntu8.8 [97.7 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2 amd64 2.4.58-1ubuntu8.8 [90.2 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble/main amd64 ssl-cert all 1.1.2ubuntu1 [17.8 kB]
Fetched 2086 kB in 3s (714 kB/s)
Preconfiguring packages ...
Selecting previously unselected package libapr1t64:amd64.
(Reading database ... 40755 files and directories currently installed.)
Preparing to unpack .../0-libapr1t64_1.7.2-3.1ubuntu0.1_amd64.deb ...
Unpacking libapr1t64:amd64 (1.7.2-3.1ubuntu0.1) ...
Selecting previously unselected package libaprutil1t64:amd64.
Preparing to unpack .../1-libaprutil1t64_1.6.3-1.1ubuntu7_amd64.deb ...
Unpacking libaprutil1t64:amd64 (1.6.3-1.1ubuntu7) ...
Selecting previously unselected package libaprutil1-dbd-sqlite3:amd64.
Preparing to unpack .../2-libaprutil1-dbd-sqlite3_1.6.3-1.1ubuntu7_amd64.deb ...
Unpacking libaprutil1-dbd-sqlite3:amd64 (1.6.3-1.1ubuntu7) ...
Selecting previously unselected package libaprutil1-ldap:amd64.
Preparing to unpack .../3-libaprutil1-ldap_1.6.3-1.1ubuntu7_amd64.deb ...
Unpacking libaprutil1-ldap:amd64 (1.6.3-1.1ubuntu7) ...
Selecting previously unselected package liblua5.4-0:amd64.
Preparing to unpack .../4-liblua5.4-0_5.4.6-3build2_amd64.deb ...
Unpacking liblua5.4-0:amd64 (5.4.6-3build2) ...
Selecting previously unselected package apache2-bin.
Preparing to unpack .../5-apache2-bin_2.4.58-1ubuntu8.8_amd64.deb ...
Unpacking apache2-bin (2.4.58-1ubuntu8.8) ...
Selecting previously unselected package apache2-data.
Preparing to unpack .../6-apache2-data_2.4.58-1ubuntu8.8_all.deb ...
Unpacking apache2-data (2.4.58-1ubuntu8.8) ...
Selecting previously unselected package apache2-utils.
Preparing to unpack .../7-apache2-utils_2.4.58-1ubuntu8.8_amd64.deb ...
Unpacking apache2-utils (2.4.58-1ubuntu8.8) ...
Selecting previously unselected package apache2.
Preparing to unpack .../8-apache2_2.4.58-1ubuntu8.8_amd64.deb ...
Unpacking apache2 (2.4.58-1ubuntu8.8) ...
Selecting previously unselected package ssl-cert.
Preparing to unpack .../9-ssl-cert_1.1.2ubuntu1_all.deb ...
Unpacking ssl-cert (1.1.2ubuntu1) ...
Setting up ssl-cert (1.1.2ubuntu1) ...
Created symlink /etc/systemd/system/multi-user.target.wants/ssl-cert.service → /usr/lib/systemd/system/ssl-cert.service.
Setting up libapr1t64:amd64 (1.7.2-3.1ubuntu0.1) ...
Setting up liblua5.4-0:amd64 (5.4.6-3build2) ...
```

<Imagen 1. Instalación y configuración de apache>

Posteriormente se realiza la Instalación de PHP con el comando apt install php libapache2-mod-php -y

<Imagen 2. Instalación y configuración de PHP>

Se inicia el servicio de apache con el comando **service apache2 start** y luego se revisa el estado del servicio apache2 **systemctl status apache2.** Se observa que el servicio se encuentra activo y en estado running.

<Imagen 3. Inicialización y comprobación del servicio apache2>

Creación del archivo PHPinfo en la ruta /var/www/html


```
root@A6Alumno10:/mnt/c/Windows/System32# echo "<?php phpinfo(); ?>" | sudo tee /var/www/html/info.php
<?php phpinfo(); ?>
root@A6Alumno10:/mnt/c/Windows/System32# curl http://localhost/info.php
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"><head>
<style type="text/css">
body {background-color: #fff; color: #222; font-family: sans-serif;}
pre {margin: 0; font-family: monospace;}
a:link {color: #009; text-decoration: none; background-color: #fff;}
a:hover {text-decoration: underline;}
table {border-collapse: collapse; border: 0; width: 934px; box-shadow: 1px 2px 3px rgba(0, 0, 0, 0.2);}
.center {text-align: center;}
.center table {margin: 1em auto; text-align: left;}
.center th {text-align: center !important;}
td, th {border: 1px solid #666; font-size: 75%; vertical-align: baseline; padding: 4px 5px;}
th {position: sticky; top: 0; background: inherit;}
h1 {font-size: 150%;}
h2 {font-size: 125%;}
h2 a:link, h2 a:visited{color: inherit; background: inherit;}
.p {text-align: left;}
.e {background-color: #ccf; width: 300px; font-weight: bold;}
.h {background-color: #99c; font-weight: bold;}
.v {background-color: #ddd; max-width: 300px; overflow-x: auto; word-wrap: break-word;}
.v i {color: #999;}
img {float: right; border: 0;}
hr {width: 934px; background-color: #ccc; border: 0; height: 1px;}
:root {--php-dark-grey: #333; --php-dark-blue: #4F5B93; --php-medium-blue: #8892BF; --php-light-blue: #E2E4EF; --php-accent-purple: #793862}@media (prefers-color-scheme: dark) {
  body {background: var(--php-dark-grey); color: var(--php-light-blue)}
  .h td, td.e, th {background-color: #606A90}
  td {border-color: #505153}
  .e {background-color: #4D4A77}
  .h {background-color: var(--php-dark-blue)}
  .v {background-color: var(--php-dark-grey)}
  hr {background-color: #505153}
}
</style>
<title>PHP 8.3.6 - phpinfo()</title><meta name="ROBOTS" content="NOINDEX,NOFOLLOW,NOARCHIVE" /></head>
<body><div class="center">
<table>
```
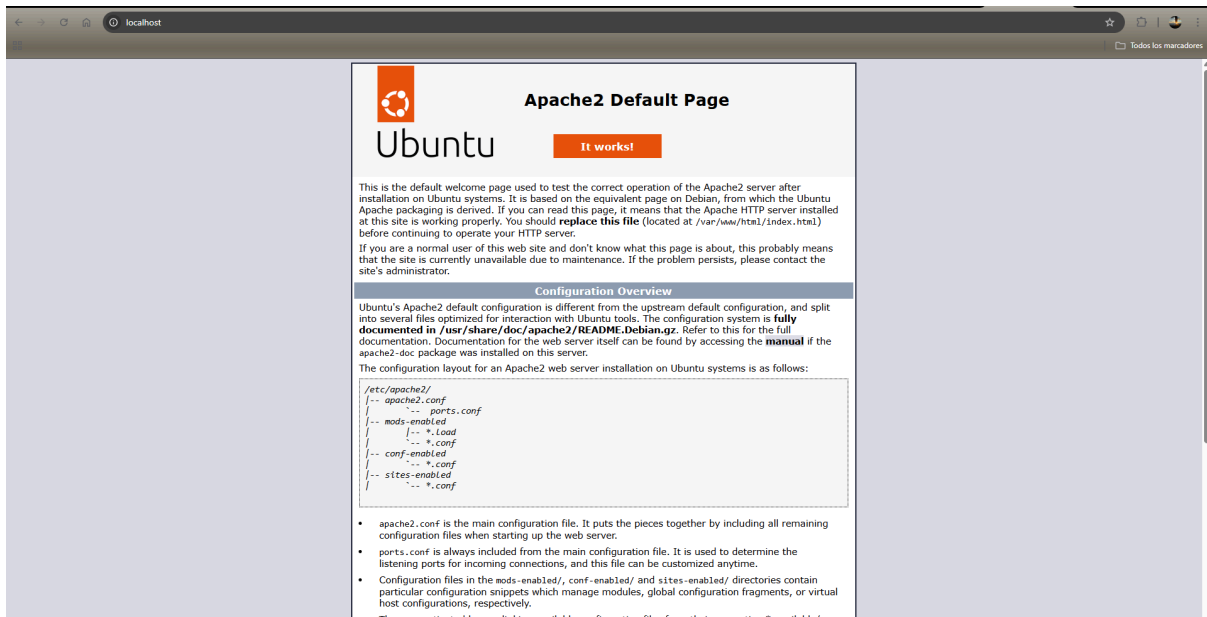
<Imagen 4. Creación del archivo PHPinfo>

Verificar en el navegador con la URL: http://localhost/info.php

<Imagen 5. Prueba de acceso al info.php>

También se realiza el acceso al http://localhost para verificar el acceso al servicio web de apache.

<Imagen 6. prueba del servicio Apache por web>

```
root@A6Alumno10:/mnt/c/Windows/System32# ip addr show eth0 | grep inet
    inet 172.18.255.4/20 brd 172.18.255.255 scope global eth0
    inet6 fe80::215:5dff:fe07:95c/64 scope link
root@A6Alumno10:/mnt/c/Windows/System32#
```
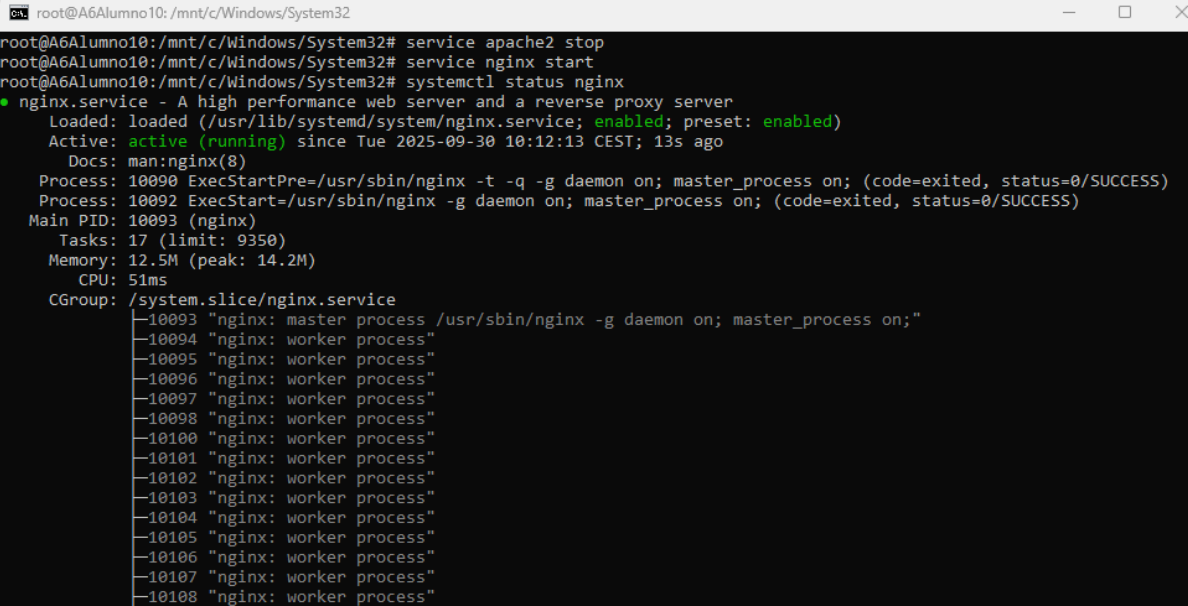
<Imagen 7. Visualización de la dirección IP>

1.2 NGINX y HTML

Instalar NGINX con el comando apt install nginx -y

```
root@A6Alumno10:/mnt/c/Windows/System32# apt install nginx -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc
The following NEW packages will be installed:
  nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 6 not upgraded.
Need to get 564 kB of archives.
After this operation, 1596 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx-common all 1.24.0-2ubuntu7.5 [43.4 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.5 [520 kB]
Fetched 564 kB in 0s (1958 kB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 41612 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7.5_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7.5) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7.5_amd64.deb ...
Unpacking nginx (1.24.0-2ubuntu7.5) ...
Setting up nginx-common (1.24.0-2ubuntu7.5) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr/lib/systemd/system/nginx.service.
Could not execute systemctl:  at /usr/bin/deb-systemd-invoke line 148.
```
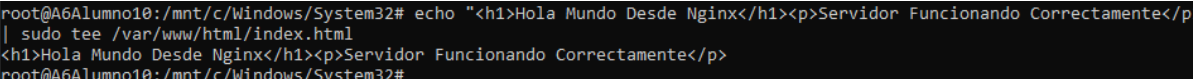
<Imagen 8. Instalación NGINX>

Se inicia el servicio de nginx, se identifica un error el cual se soluciona deteniendo el servicio de apache e intentando de nuevo.

<Imagen 9. Detener el servicio de apache2, iniciar el servicio de nginx, y verificar su estado>

Se crea un archivo index.html en la ruta /var/www/html/index.html

<Imagen 10. Creación del index.html>

Luego se realiza la prueba de acceso por web a través de la URL http://localhost/index.html

<Imagen 11. Prueba de acceso al index.html>