

Workshop 03 - Parten 3

Curso ISW811

Función del host y máquina virtual

- Función del host: Gestiona DNS, riesgoso modificar, guardado en PCs.
- Invitada: Máquina virtual.
- Anfitriona: PC físico.

Inicio y acceso a Vagrant

1. Iniciar Vagrant:

```
cd ~/Desktop/ISW811/K/VMs/webserver
```

```
vagrant up
```

```
kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver (master)
$ vagrant up
Bringing machine 'default' up with 'virtualbox' provider...
==> default: Checking if box 'debian/bookworm64' version '12.20250126.1' is up to date...
==> default: Clearing any previously set forwarded ports...
==> default: Clearing any previously set network interfaces...
==> default: Preparing network interfaces based on configuration...
default: Adapter 1: nat
default: Adapter 2: hostonly
==> default: Forwarding ports...
default: 22 (guest) => 2222 (host) (adapter 1)
==> default: Booting VM...
==> default: Waiting for machine to boot. This may take a few minutes...
default: SSH address: 127.0.0.1:2222
default: SSH username: vagrant
default: SSH auth method: private key
==> default: Machine booted and ready!
==> default: Checking for guest additions in VM...
default: The guest additions on this VM do not match the installed version of the guest OS.
f
default: VirtualBox! In most cases this is fine, but in rare cases it can
default: prevent things such as shared folders from working properly. If you
see
```

2. Acceder a Vagrant:

```
vagrant ssh
```

```
anoel@Alison_Alfaro MINGW64 ~/Desktop/ISW811/K/VMs/webserver
$ vagrant ssh
Linux webserver 6.1.0-29-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.123-1 (2025-01-
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Jun  6 19:00:19 2025 from 10.0.2.2
```

Conceptos clave

- Vhost_alias: Configuración de alias virtual
- Rewrite: Sobrescribe peticiones.

Creación de repositorio y commit

1. Crear carpeta y repo:

```
mkdir workshop03
```

```
cd workshop03
```

```
git init
```

2. Agregar y commit:

```
git add .
```

```
git commit -m "Inicializar Workshop 03"
```

```
$ cd ..

kathe@Katherine MINGW64 ~/Desktop/ISW811/K (master)
$ cd Workshopp03

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$ ll
total 0

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$ touch README.md

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$ ll
total 0
-rw-r--r-- 1 kathe 197609 0 Jun 10 19:01 README.md

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$ git init
Reinitialized existing Git repository in C:/Users/kathe/Desktop/ISW811/K/Workshopp03/.git/

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$ gto add README.md
bash: gto: command not found

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$ git add README.md

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$ git commit -m "Initial commit"
[master (root-commit) be2b075] Initial commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 README.md

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/Workshopp03 (master)
$
```

Verificación de red

1. Ping a IP:

```
ping 192.168.56.10
```

```
kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver (master)
$ ping 192.168.56.10

Haciendo ping a 192.168.56.10 con 32 bytes de datos:
Respuesta desde 192.168.56.10: bytes=32 tiempo=11ms TTL=64
Respuesta desde 192.168.56.10: bytes=32 tiempo=2ms TTL=64
Respuesta desde 192.168.56.10: bytes=32 tiempo=1ms TTL=64
Respuesta desde 192.168.56.10: bytes=32 tiempo=1ms TTL=64

Estadísticas de ping para 192.168.56.10:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
    (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
    Mínimo = 1ms, Máximo = 11ms, Media = 3ms
```

Creación de sitios y carpetas

1. Crear carpetas en sites:

```
cd /vagrant/sites
```

```
mkdir assets images
```

```
ls -la
```

2. Crear archivos:

```
mkdir css
```

```
touch index.html styles.css
```

3. Descargar imagen:

```
curl -o images/patitos.jpg https://example.com/patitos.jpg
```

4. Abrir VS Code: Abrir proyecto en VS Code.

```

vagrant@webserver: /vagrant

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites (master)
$ mkdir kaprendas.isw811.xyz

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites (master)
$ cd kaprendas.isw811.xyz

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites/kaprendas.isw811.
xyz (master)
$ mkdir assetes images

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites/kaprendas.isw811.
xyz (master)
$ ll
total 0
drwxr-xr-x 1 kathe 197609 0 Jun 10 20:24 assetes/
drwxr-xr-x 1 kathe 197609 0 Jun 10 20:24 images/

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites/kaprendas.isw811.
xyz (master)
$ touch index.html assetes/styles.css

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites/kaprendas.isw811.
xyz (master)
$ curl -o ./images/lospatitos.webp https://coding-rs.s3.amazonaws.com/images/los
patitos/lospatitos.webp
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
  0   0   0    0    0    0     0      0  --:--:--  0:00:01 --:--:--    0
curl: (35) schannel: next InitializeSecurityContext failed: CRYPT_E_NO_REVOCATIO
N_CHECK (0x80092012) - La funci n de revocaci n no puede comprobar la revocaci n
para el certificado.

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites/kaprendas.isw811.
xyz (master)
$ code .

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites/kaprendas.isw811.
xyz (master)
$ cd ..

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/sites (master)
$ cd ..

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver (master)
$ mkdir conf

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver (master)
$ ll
total 4
-rw-r--r-- 1 kathe 197609 3563 Jun 10 19:31 Vagrantfile
drwxr-xr-x 1 kathe 197609  0 Jun 10 20:28 conf/
drwxr-xr-x 1 kathe 197609  0 Jun 10 20:23 sites/

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver (master)
$ cd conf

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/conf (master)
$ touch kaprendas.isw811.xyz

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/conf (master)
$ code kaprendas.isw811.xyz

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/conf (master)
$ cd ..

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver (master)
$ vagrant ssh
Linux webserver 6.1.0-29-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.123-1 (2025-01-
02) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Wed Jun 11 01:59:42 2025 from 10.0.2.2
vagrant@webserver:~$ sudo a2enmod vhost alias rewrite ssl

```

1. index.html

```
Vagrantfile X index.html X styles.css
webserver > sites > kaprendas.isw811.xyz > index.html > html
1  <!DOCTYPE html>
2  <html lang="es">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Los Patitos</title>
7      <link rel="stylesheet" href="assetes/styles.css">
8  </head>
9  <body>
10     <header>
11         <h1>Bienvenidos a Los Patitos</h1>
12     </header>
13     <main>
14         <section>
15             
16             <p>Este es un sitio de prueba creado para el curso básico de programación web con software
17         </section>
18     </main>
19     <footer>
20         <p>&copy; 2024 Los Patitos. Todos los derechos reservados.</p>
21     </footer>
22 </body>
23 </html>
```

2. styles.css

```
webserver> sites\de\aprendas\sw81\kxyz\assets\css\styles.css > ...
1  body {
2      font-family: Arial, sans-serif;
3      text-align: center;
4      background-color: #f0f8ff;
5  }
6
7  header {
8      background-color: #ffdd59;
9      padding: 20px;
10 }
11
12 h1 {
13     color: #333;
14 }
15
16 main {
17     margin: 20px auto;
18     max-width: 800px;
19 }
20
21 img {
22     max-width: 100%;
23     height: auto;
24 }
25
26 footer {
27     background-color: #333;
28     color: #fff;
29     padding: 10px;
30 }
```

Configuración de dominio

1. Crear carpeta confs:

```
cd /vagrant
```

```
mkdir confs
```

```
ls -la
```

```
kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver
$ ll
total 4
-rw-r--r-- 1 kathe 197609 3563 Jun 10 19:3
1 Vagrantfile
drwxr-xr-x 1 kathe 197609 0 Jun 10 21:1
9 conf/
drwxr-xr-x 1 kathe 197609 0 Jun 10 20:2
3 sites/
```

2. Crear archivo de dominio:

```
touch confs/kaprendas.isw811.xyz.conf
```

3. Copiar configuración:

```
sudo cp confs/kaprendas.isw811.xyz.conf
```

```
kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver/conf (master)
$ touch kaprendas.isw811.xyz.conf
```

Verificación y habilitación

1. Verificar sintaxis:

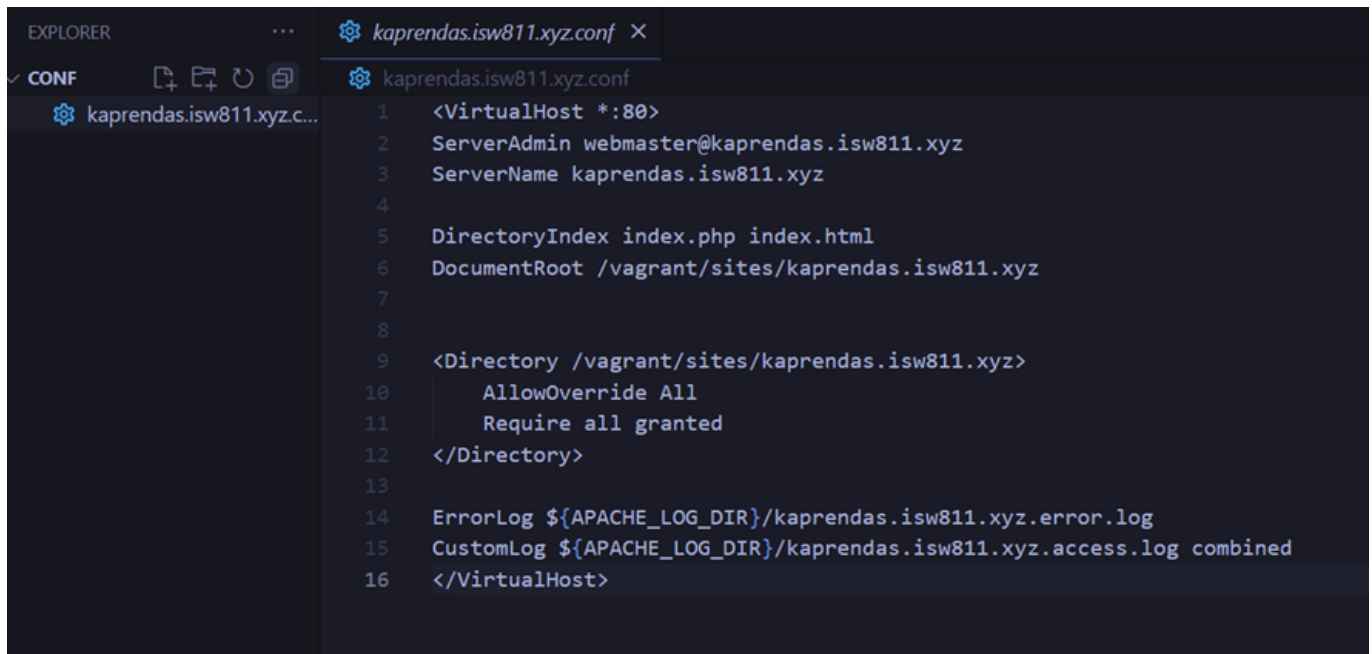
```
sudo apache2ctl configtest
```

2. Habilitar sitio:

```
sudo a2ensite kaprendas.isw811.xyz.conf
```

3. Reiniciar Apache:

```
sudo systemctl restart apache2
```

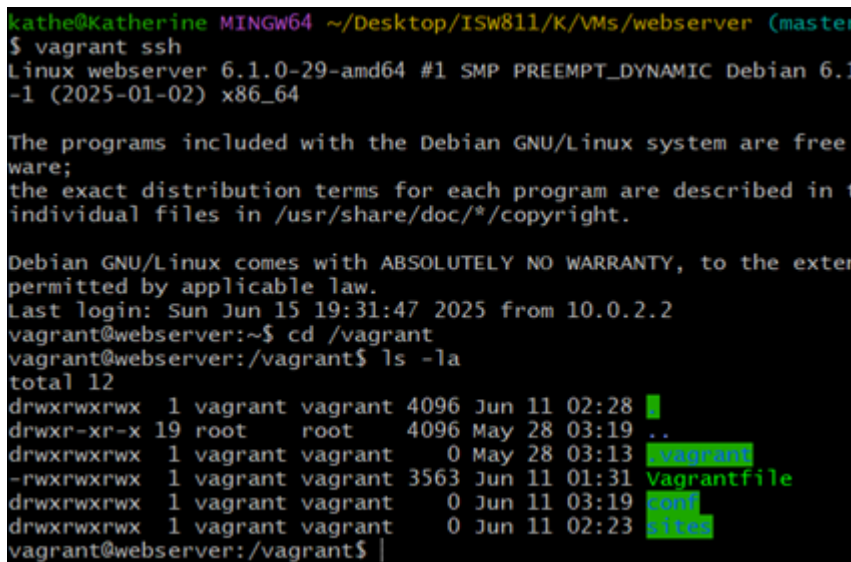
```

1 <VirtualHost *:80>
2   ServerAdmin webmaster@kaprendas.isw811.xyz
3   ServerName kaprendas.isw811.xyz
4
5   DirectoryIndex index.php index.html
6   DocumentRoot /vagrant/sites/kaprendas.isw811.xyz
7
8
9   <Directory /vagrant/sites/kaprendas.isw811.xyz>
10      AllowOverride All
11      Require all granted
12   </Directory>
13
14   ErrorLog ${APACHE_LOG_DIR}/kaprendas.isw811.xyz.error.log
15   CustomLog ${APACHE_LOG_DIR}/kaprendas.isw811.xyz.access.log combined
16 </VirtualHost>

```

Estado dentro de la VM

- Estás en /home/vagrant dentro de la VM.
- Al hacer `cd /vagrant` y `ls -la`, ves:
- Archivos y carpetas compartidas desde tu máquina Windows (~/Desktop/ISW811/K/VMs/webserver).
- Incluye `kaprendas.isw811.xyz.conf` (444 bytes, creado el 11/06/2025).
- Todo está sincronizado correctamente.



```

kathe@Katherine MINGW64 ~/Desktop/ISW811/K/VMs/webserver (master)
$ vagrant ssh
Linux webserver 6.1.0-29-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.0-29-amd64 (2025-01-02) x86_64

The programs included with the Debian GNU/Linux system are free
ware;
the exact distribution terms for each program are described in t
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the exte
permitted by applicable law.
Last login: Sun Jun 15 19:31:47 2025 from 10.0.2.2
vagrant@webserver:~$ cd /vagrant
vagrant@webserver:/vagrant$ ls -la
total 12
drwxrwxrwx 1 vagrant vagrant 4096 Jun 11 02:28 .
drwxr-xr-x 19 root    root    4096 May 28 03:19 ..
drwxrwxrwx 1 vagrant vagrant  0 May 28 03:13 vagrant
-rwxrwxrwx 1 vagrant vagrant 3563 Jun 11 01:31 vagrantfile
drwxrwxrwx 1 vagrant vagrant  0 Jun 11 03:19 conf
drwxrwxrwx 1 vagrant vagrant  0 Jun 11 02:23 sites
vagrant@webserver:/vagrant$ |

```

Notas

- `cd /vagrant`: Navega a la raíz compartida.
- Sincronización: Archivos como `kaprendas.isw811.xyz.conf` (444 bytes, creado el 11/06/2025) están sincronizados desde ~/Desktop/ISW811/K/VMs/webserver.
- `|`: Tubería para redirigir salida.

```
vagrant@webserver:~$ cd /vagrant/  
vagrant@webserver:/vagrant$ cd conf  
vagrant@webserver:/vagrant/conf$ ls -la  
total 5  
drwxrwxrwx 1 vagrant vagrant 0 Jun 11 03:19 .  
drwxrwxrwx 1 vagrant vagrant 4096 Jun 11 02:28 ..  
-rwxrwxrwx 1 vagrant vagrant 446 Jun 11 02:33 kaprendas.isw811.xyz.conf  
vagrant@webserver:/vagrant/conf$
```

Verificación de archivo

1. Verificar kaprendas.isw811.xyz.conf:

```
cd /vagrant/confs
```

```
ls -la
```

```
vagrant@webserver:/vagrant/conf$ sudo cp kaprendas.isw811.xyz.conf /etc//apache2//sites-available/  
vagrant@webserver:/vagrant/conf$
```

2. Ejecutamos el comando para verificar que no existan errores en syntax

```
vagrant@webserver:/vagrant/conf$ sudo apache2ctl -t  
Syntax OK  
vagrant@webserver:/vagrant/conf$
```

3. Habilitamos el sitio:

```
vagrant@webserver:/vagrant/conf$ sudo a2ensite kaprendas.isw811.xyz.conf  
Site kaprendas.isw811.xyz already enabled
```

4. Reiniciamos apache

```
vagrant@webserver:/vagrant/conf$ sudo systemctl reload apache2  
vagrant@webserver:/vagrant/conf$
```

5. Finalmente amos al navegador y buscamos "http://kaprendas.isw811.xyz" y debemos ver algo así:

