

## **3 extended apache configuration**

restart kills the procese and initialice the daemon

reload restores the config info

### **Extended Apache VirtualHost Configuration Tutorial (HTTP only)**

#### **1. Introduction**

In this tutorial, new directives are explained:

- ErrorDocument
- Options -Indexes
- ServerAlias yourname.com yourname.es
- Redirect 301 /search http://www.google.com/
- DirectoryIndex main.html

#### **2. Website Directory**

Asure the directory that will hold your website files:

```
sudo mkdir -p /var/www/yourname.com/
```

Then add a test homepage:

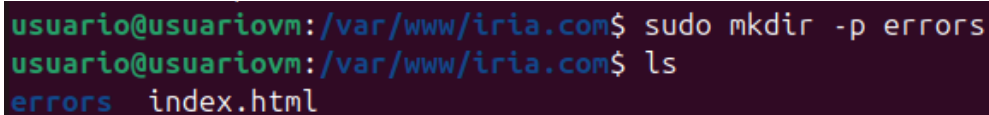
```
echo "<h1>Welcome to yourname.com!</h1>" | sudo tee  
/var/www/yourname.com//main.html
```

To set up a custom error page for the 404 (Page Not Found) error in Apache2, you can modify the default site configuration to add the `ErrorDocument` directive. Here are the steps:

## Create the Custom 404 Error Page

Create an HTML file to be displayed when a 404 error occurs:

```
sudo mkdir -p /var/www/html/errors
sudo nano /var/www/html/errors/404.html
```



```
usuario@usuariovm:/var/www/iria.com$ sudo mkdir -p errors
usuario@usuariovm:/var/www/iria.com$ ls
errors  index.html
```

Add custom content to `404.html`. For example:

```
<html>
  <head><title>Page Not Found</title></head>
  <body>
    <h1>404 - Page Not Found</h1>
    <p>Sorry, but the page you are looking for does not
exist.</p>
    <a href="/">Go back to the homepage</a>
  </body>
</html>
```

Save and close the file.



```
usuario@usuariovm:/var/www/iria.com/errors$ cat 404.html
<html>
<head><title>Page not found</title></head>
<body>
    <h1>Page not found in iria.com</h1>
    <a href="/">Volver atras</a>

</body>
</html>
```

## Configure the Error Page in the Site Configuration File

1. Open the default site configuration file:
2. `sudo nano /etc/apache2/sites-available/000-default.conf`
3. Add the following line inside the `<VirtualHost>` block to specify the custom error page:
4. `ErrorDocument 404 /errors/404.html`

The configuration file should look something like this:

```

<VirtualHost *:80>
    ServerName example.com
    ServerAdmin webmaster@example.com
    DocumentRoot /var/www/html/example

    # Custom error page
    ErrorDocument 404 /errors/404.html

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>

```

5. Save and close the file.

```

GNU nano 7.2 /etc/apache2/sites-available/iria.com.conf *
<VirtualHost *:80>
    # The ServerName directive sets the request scheme, hostname and port that
    # the server uses to identify itself. This is used when creating
    # redirection URLs. In the context of virtual hosts, the ServerName
    # specifies what hostname must appear in the request's Host: header to
    # match this virtual host. For the default virtual host (this file) this
    # value is not decisive as it is used as a last resort host regardless.
    # However, you must set it for any further virtual host explicitly.
    #ServerName www.example.com

    ServerAdmin webmaster@iria.com
    DocumentRoot /var/www/iria.com
    ServerName iria.com
    ErrorDocument 404 /errors/404.html
    # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,

```

## ERORS. Test the Custom Error Page

1. Try accessing a URL that does not exist on your domain, like `http://example.com/does-not-exist`.
2. You should see the custom 404 error page you created at `/var/www/html/errors/404.html`.

This sets up a custom 404 error page in Apache2 for the default site.



### 3. Explanation of Each Directive

Directive	Description
<b>ServerName</b> yourname.com	The main domain for this VirtualHost.
<b>ServerAlias</b> yourname.com yourname.es	Allows the same site to respond to both yourname.com and yourname.es.
<b>DocumentRoot</b>	The folder where your web files are stored.
<b>Options -Indexes</b>	Prevents Apache from listing files if there's no index file.
<b>AllowOverride All</b>	Allows .htaccess files to override settings if needed.
<b>Require all granted</b>	Lets everyone access the site.
<b>DirectoryIndex</b> main.html	Sets main.html as the default page.
<b>Redirect 301</b> /search <a href="http://www.google.com/">http://www.google.com/</a>	Redirects all requests to /search to Google permanently.
<b>ErrorLog / CustomLog</b>	Specifies log file locations for errors and access.

### 4. Create the Apache VirtualHost File

Now create a configuration file for your site:

```
sudo nano /etc/apache2/sites-available/yourname.com.conf
```

```
usuario@usuariovm: /var/www/iria.com/errors$ sudo nano /etc/apache2/sites-available/iria.com.conf
```

Paste this full configuration:

```
<VirtualHost *:80>

    ServerAdmin admin@yourname.com

    ServerName yourname.com

    ServerAlias yourname.com yourname.es


    DocumentRoot /var/www/yourname.com/

    <Directory /var/www/yourname.com >

        Options -Indexes

        AllowOverride All

        Require all granted

        DirectoryIndex main.html

    </Directory>

    # create 404.html in ./errors

    ErrorDocument 404 /errors/404.html

    # Redirect only the /search path to Google

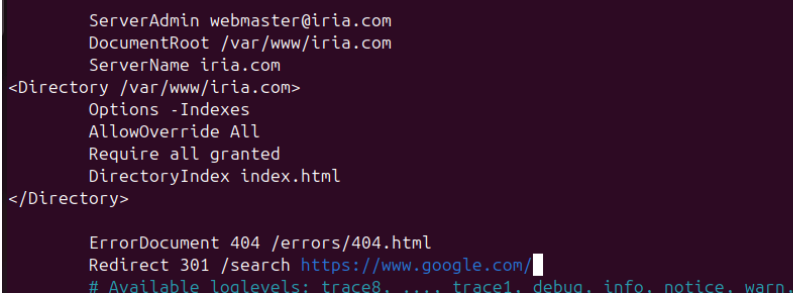
    Redirect 301 /search http://www.google.com/

    ErrorLog ${APACHE_LOG_DIR}/yourname_error.log

    CustomLog ${APACHE_LOG_DIR}/yourname_access.log combined

</VirtualHost>
```

Save and close (Ctrl + O, Enter, Ctrl + X).

A screenshot of a terminal window with a dark purple background, showing the Apache configuration file content. The text is white and matches the code block above. At the bottom, there is a redacted line of text starting with '# Available loglevels:'.

```
ServerAdmin webmaster@iria.com
DocumentRoot /var/www/iria.com
ServerName iria.com
<Directory /var/www/iria.com>
    Options -Indexes
    AllowOverride All
    Require all granted
    DirectoryIndex index.html
</Directory>

ErrorDocument 404 /errors/404.html
Redirect 301 /search https://www.google.com/
# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
```

```
ServerName iria.com
ServerAlias iria.com iria.es
```

## 5. 🚀 Enable and Activate the Site

Enable your VirtualHost:

```
sudo a2ensite yourname.com.conf
```

```
usuario@usuariovm:/etc/apache2/sites-available$ sudo a2ensite iria.com.conf
Site iria.com already enabled
usuario@usuariovm:/etc/apache2/sites-available$
```

Then reload Apache to apply the changes:

```
sudo systemctl reload apache2
```

You can disable the default Apache page if you like:

```
sudo a2dissite 000-default.conf
```

```
sudo systemctl reload apache2
```

## 6. 🧪 Test the Configuration

First, check for syntax errors:

```
sudo apache2ctl configtest
```

```
usuario@usuariovm:/etc/apache2/sites-available$ sudo apache2ctl configtest
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1 as fallback
Syntax OK
usuario@usuariovm:/etc/apache2/sites-available$
```

Expected output:

Syntax OK

Now test in your browser:

Test URL	Expected Result
<a href="http://yourname.com/">http://yourname.com/</a>	Displays your main.html page.
<a href="http://yourname.com/search">http://yourname.com/search</a>	Redirects to <a href="http://www.google.com/">http://www.google.com/</a> .
<a href="http://yourname.com/folder/">http://yourname.com/folder/</a>	Returns “403 Forbidden” (no directory listing).

Test URL	Expected Result
http://yourname.es/	Loads the same website as yourname.com.

## 7. Summary of Configuration

Here's the final VirtualHost block for clarity:

```
<VirtualHost *:80>
```

```
    ServerAdmin admin@yourname.com
```

```
    ServerName yourname.com
```

```
    ServerAlias yourname.com yourname.es
```

```
    DocumentRoot /var/www/yourname.com
```

```
    <Directory /var/www/yourname.com >
```

```
        Options -Indexes
```

```
        AllowOverride All
```

```
        Require all granted
```

```
        DirectoryIndex main.html
```

```
    </Directory>
```

```
    Redirect 301 /search http://www.google.com/
```

```
    ErrorLog ${APACHE_LOG_DIR}/yourname_error.log
```

```
    CustomLog ${APACHE_LOG_DIR}/yourname_access.log combined
```

```
</VirtualHost>
```

Now your working Apache VirtualHost

- Hosts your site at yourname.com and yourname.es
- Uses main.html as the homepage
- Manages errors
- Disables directory listing
- Redirects /search to Google
- Works entirely on **HTTP (no SSL)**

