

UNIFORM

SERVER

ZERO

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Analizaremos el paquete **Uniform Server Zero**, a través de los siguientes puntos:

Aplicaciones Incluidas

- **Apache:** Servidor web para alojar y gestionar sitios web

```
C:\Users\rodrigo.mardel\UniServerZ\core\apache2>tree
Listado de rutas de carpetas
El número de serie del volumen es 7C7E-EF7B
C:..
├── bin
├── conf
│   ├── extra
│   └── extra_us
├── error
│   └── include
├── icons
│   └── small
├── logs
├── modules
└── server_certs
```

Apache HTTP Server is an open-source web server platform. It is one of the main components of The Uniform Server. Apache has been pre-configured to run as a local web server. There are several configuration options allowing the server to be accessed from an Intranet or the Internet. The Uniform Server Zero provides an easy-to-use control interface, UniController, allowing you to run servers as a standard program. UniController contains a menu specifically targeting Apache. From this menu you can put your server on-line, change ports or create a server certificate. This page covers all the menu options.

- Change Apache ports
 - Change standard and ssl ports
- Change Apache Root folders - www or ssl
 - httpd.conf or httpd-ssl.conf
- Edit Basic and Modules
 - Basic Configuration and Modules Enable/Disable
- Access and Passwords
 - Put servers on-line
- Apache SSL
 - Server Certificate and Key generator. SSL enable/disable
- Apache VHosts
 - Create and delete Vhost
- Apache server info - status
 - Apache server information and status
- Apache Logs
 - View and delete logs
- Apache Syntax Check - t
 - Check Apache config for errors
- Start-up pages
 - Enable/Disable pages at start-up. Select pages

Change Apache ports

The **Change Apache ports** menu allows you to specify the Apache standard and secure ports. Two sub-menus **Change Apache port** and **Change Apache SSL port** are provided to set the standard and secure ports respectively:

Change Apache port

Apache > Change Apache ports > Change Apache port

- Current port setting is displayed.
- Change the port to required value.
- Click the corresponding **Ok** button.

Change Apache SSL port

Apache > Change Apache ports > Change Apache SSL port

- Current port setting is displayed.
- Change the port to required value.
- Click the corresponding **Ok** button.

Note: For new port to become effective, you must restart the servers.

General Notes:

The Uniform Server Zero sets port environment variables **AP_PORT** and **AP_SSL_PORT** and updates the user configuration file **user_configuration.bat**. Environment variables are used in the following Apache configuration files.

Apache standard port \$(AP_PORT)

- UniServerZ\core\apache2\conf\httpd.conf
- UniServerZ\core\apache2\conf\extra\httpd-vhosts.conf

Apache ssl port \$(AP_SSL_PORT)

- UniServerZ\core\apache2\conf\extra\ssl.conf

- **MySQL:** Sistema de gestión de bases de datos para almacenar y manejar datos.

```
C:\Users\rodrigo.mardel\UniServerZ\core\mysql>tree
Listado de rutas de carpetas
El número de serie del volumen es 7C7E-EF7B
C:.\
├── bin
├── data
│   ├── #innodb_redo
│   ├── #innodb_temp
│   ├── ciclos
│   ├── mysql
│   ├── performance_schema
│   ├── phpmyadmin
│   ├── rumbobici
│   └── sys
├── lib
│   ├── plugin
│   ├── private
│   │   └── icudt73l
└── share
    ├── bulgarian
    ├── charsets
    ├── czech
    ├── danish
    ├── dutch
    ├── english
    ├── estonian
    ├── french
    ├── german
    ├── greek
    ├── hungarian
    ├── italian
    ├── japanese
    ├── korean
    ├── norwegian
    ├── norwegian-ny
    ├── polish
    ├── portuguese
    ├── romanian
    ├── russian
    ├── serbian
    ├── slovak
    ├── spanish
    ├── swedish
    └── ukrainian
```

MySQL

MySQL is an open source database server. When used in conjunction with PHP scripts, powerful and dynamic server-side applications can be created. MySQL server administration is performed using phpMyAdmin and The Uniform Server's integrated utilities. This page covers the **MySQL** UniController menu.

Note: With the appropriate module (plugin), you can run either MySQL or MariaDB server. These are equivalent; UniController text adapts to the plugin installed. This documentation makes no distinction and refers to MySQL. While reading this documentation, interchange MySQL and MariaDB as appropriate.

Change MySQL port

The **Change MySQL port** menu allows you to specify the MySQL port (standard port: 3306).

Change MySQL port

MySQL > Change MySQL port

- Current port setting is displayed.
- Change the port to required value.
- Click the corresponding **OK** button.

Note: For new port to become effective, you must restart the servers.

General Notes:

The Uniform Server Zero sets the port environment variable `MYSQL_TCP_PORT` and updates the user configuration file `user_configuration.bat`. The environment variable `MYSQL_TCP_PORT` is used by MySQL standard utilities.

- **PHP:** Lenguaje de programación para el desarrollo de aplicaciones web dinámicas.

```
C:\Users\rodrigo.mardel\UniServerZ\core\php83>tree
Listado de rutas de carpetas
El número de serie del volumen es 7C7E-EF7B
C:.\
├── extensions
├── extras
│   └── ssl
├── lib
│   └── enchant
```

PHP

PHP is a general purpose scripting language designed for creating dynamic web pages. The Apache server uses a PHP processor module to generate the final web page being served. It interprets code embedded into HTML documents. PHP has been pre-configured for test, production and development. A UniController sub-menu allows you to easily switch between the three configuration. This page covers configuration and additional features for maintaining PHP.

View phpinfo

- Runs PHP Function `phpinfo()`
- Select PHP version - Versions 7.x to 8.x
- Select PHP configuration file - `php.ini`, `php-development.ini` or `php-production.ini`
- Edit selected configuration file - Edit file in Notepad
- Edit Basic and Modules - Edit Basic Configuration and Enable/Disable PHP Modules
- Enable/Disable Zend OpCache Accelerator - Enable/Disable Zend OpCache PHP Accelerator
- View Zend OpCache Control Panel - View Zend OpCache PHP Accelerator Control Panel

Note: A default installation of Uniform Server Zero installs PHP as an Apache module.

View phpinfo

PHP > View phpinfo

This menu button opens a page in the default browser that runs the PHP Function `phpinfo()`, displaying a wealth of information relating to PHP. The page provides very detailed information and a menu splits this into smaller sections, making it easier to read.

- url: `http://localhost/us_extra/phpinfo.php` - Page displayed
- Location: `C:\UniServerZ\home\us_extra\phpinfo.php`

PHP Info Menu

- Configuration - Displays PHP Core configuration.
- Environment - PHP current environment.
- Modules - List all modules.
- Extensions - Overview and details (includes functions) for all loaded extensions.
- Variables - List all currently available PHP variables.
- General - Intro information.

Select PHP version

The Uniform Server Zero provides switching between PHP versions 7.x to 8.x. To achieve this, you need to download a suitable PHP plugin for each version.

PHP > Select PHP version

Note: While Apache is running, menu option is disabled (grayed out) to prevent problems.

Selection:

- Click version you wish to use (A-F).
- Previous selection is deselected and new selection enabled.
- Selected PHP version is indicated by a check marker (E).

Note 1: For the new settings to become effective, you must restart the Apache server.

Note 2: Grayed out menu button indicates that PHP version plugin is not installed.

Note: For full menu details, see **PHP Version Switching** page.

- **phpMyAdmin:** Herramienta para la administración de bases de datos MySQL a través de una interfaz gráfica web.

```
C:\Users\rodrigo.mardel\UniServerZ\core\mysql\data\phpmyadmin>dir
El volumen de la unidad C no tiene etiqueta.
El número de serie del volumen es: 7C7E-EF7B

Directorio de C:\Users\rodrigo.mardel\UniServerZ\core\mysql\data\phpmyadmin

25/11/2023  23:18    <DIR>          .
28/01/2025  12:17    <DIR>          ..
25/11/2023  23:11             114.688 pma__bookmark.ibd
25/11/2023  23:11             114.688 pma__central_columns.ibd
25/11/2023  23:11             131.072 pma__column_info.ibd
20/01/2025  11:52             114.688 pma__designer_settings.ibd
25/11/2023  23:11             131.072 pma__export_templates.ibd
25/11/2023  23:11             114.688 pma__favorite.ibd
25/11/2023  23:11             131.072 pma__history.ibd
25/11/2023  23:11             114.688 pma__navigationhiding.ibd
25/11/2023  23:11             131.072 pma__pdf_pages.ibd
27/01/2025  11:03             114.688 pma__recent.ibd
25/11/2023  23:11             131.072 pma__relation.ibd
25/11/2023  23:11             131.072 pma__savedsearches.ibd
25/11/2023  23:11             114.688 pma__table_coords.ibd
25/11/2023  23:11             114.688 pma__table_info.ibd
25/11/2023  23:11             114.688 pma__table_uiprefs.ibd
25/11/2023  23:11             114.688 pma__tracking.ibd
28/01/2025  12:22             114.688 pma__userconfig.ibd
25/11/2023  23:11             114.688 pma__usergroups.ibd
25/11/2023  23:11             114.688 pma__users.ibd
                19 archivos          2.277.376 bytes
                2 dirs    554.561.499.136 bytes libres
```

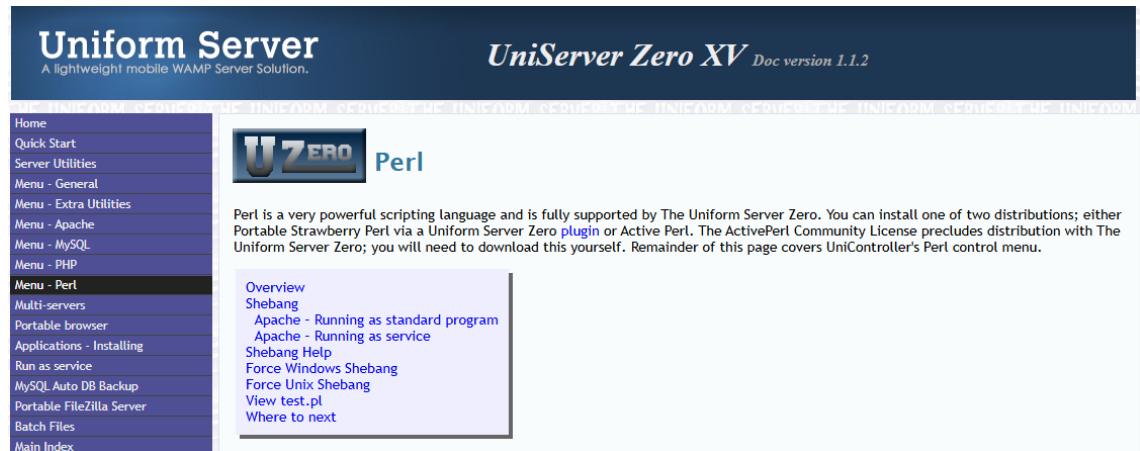
The screenshot shows the phpMyAdmin interface for a database named 'ciclos'. The 'alumno' table is selected, and its structure is displayed. The table has four columns: 'id_al' (int, primary key), 'nombre' (varchar), 'edad' (int), and 'id_curso' (int). The data table shows five rows of student information.

id_al	nombre	edad	id_curso
1	Ana	18	1
2	Sergio	18	1
3	Jorge	19	1
4	Maria	21	2
5	Pedro	23	2

The interface also includes a sidebar with a database tree, a top navigation bar with various tools (Examinar, Estructura, SQL, etc.), and a bottom section for saving the current query as a favorite.

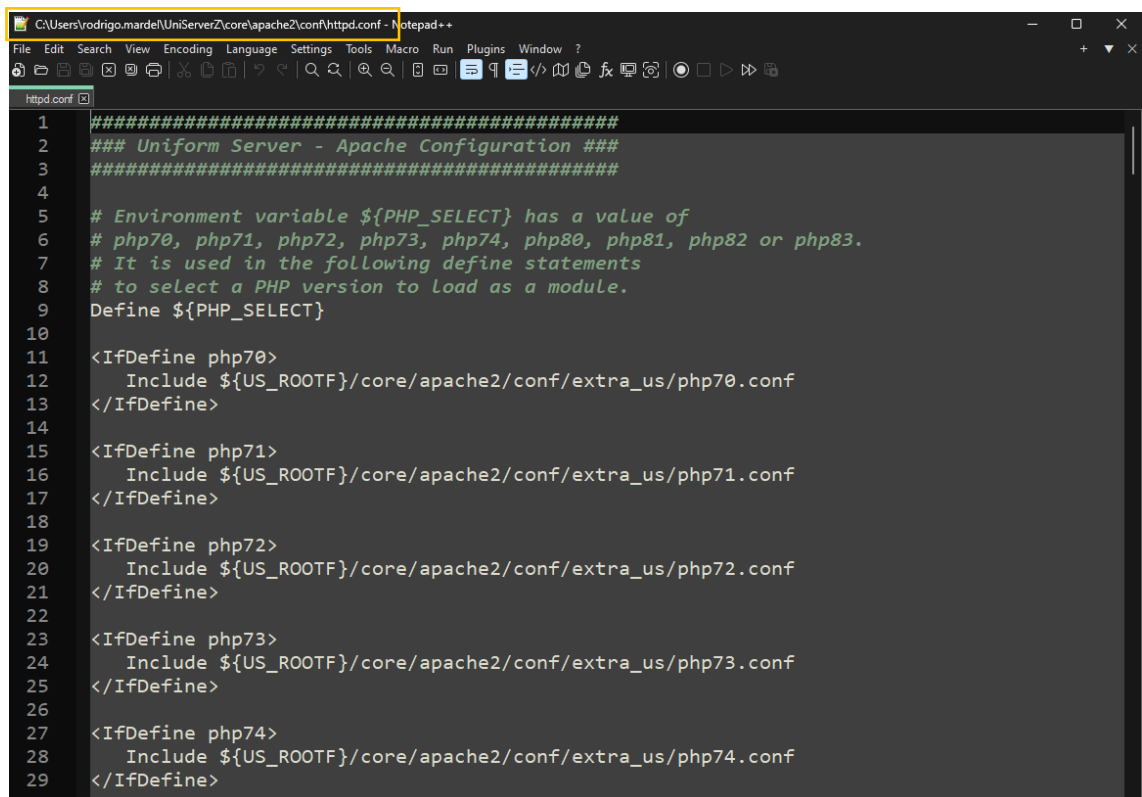
- **Perl:** Lenguaje de programación que puede ser útil para ciertos scripts y tareas de administración.

UniServerZ\docs\manual

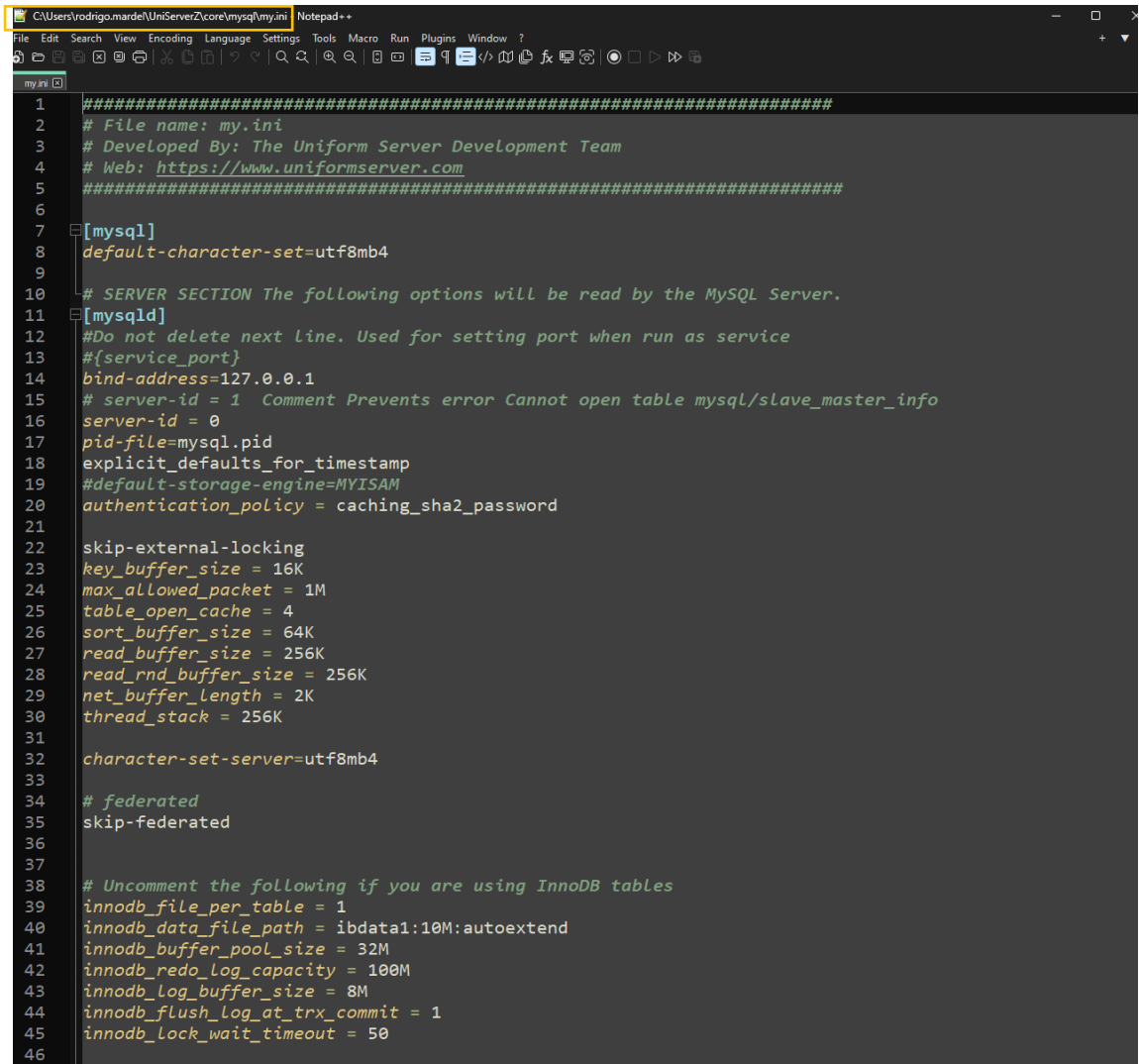


Archivos de configuración

- **Apache**

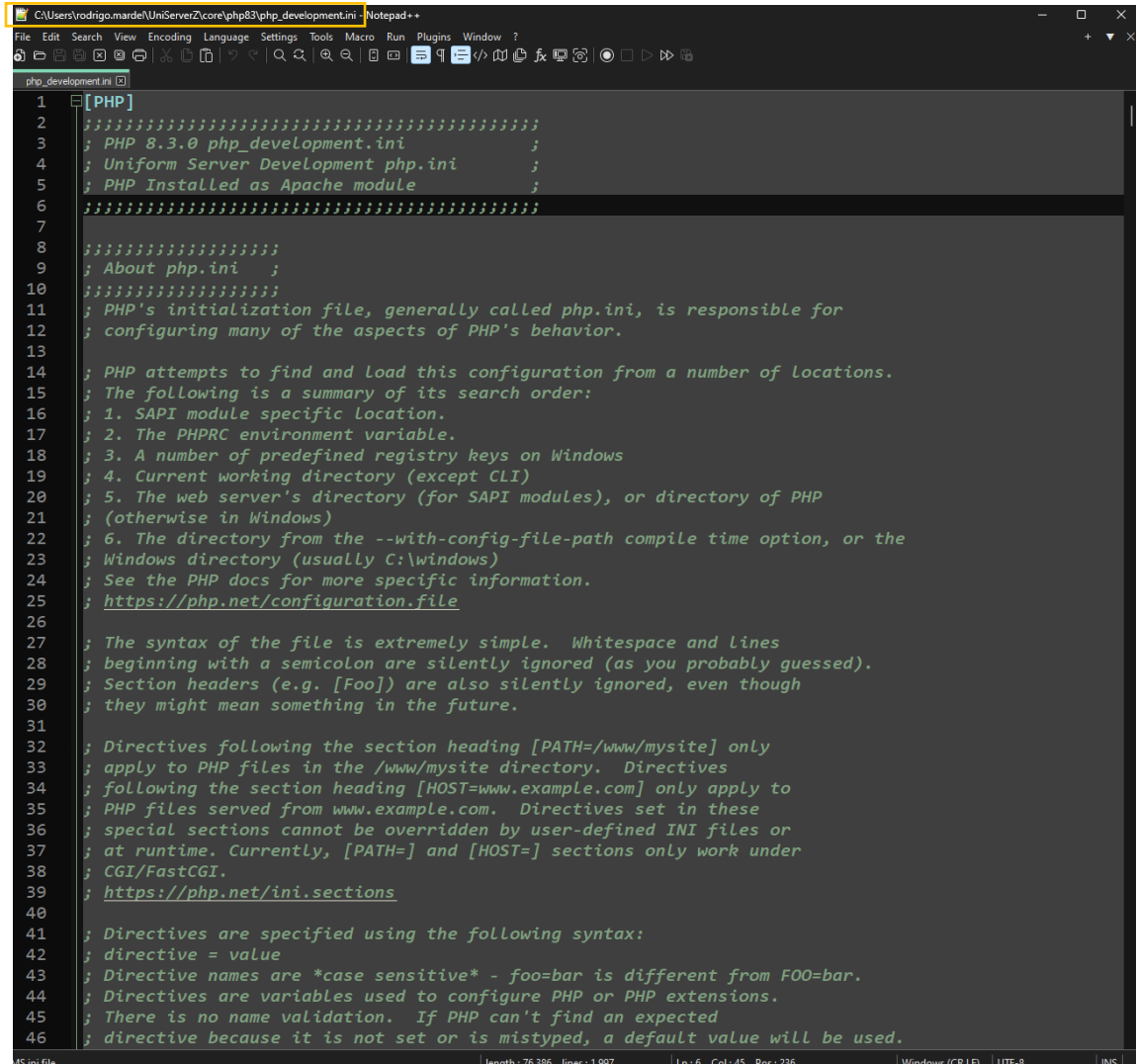


- MySQL



```
1 #####
2 # File name: my.ini
3 # Developed By: The Uniform Server Development Team
4 # Web: https://www.uniformserver.com
5 #####
6
7 [mysql]
8 default-character-set=utf8mb4
9
10 # SERVER SECTION The following options will be read by the MySQL Server.
11 [mysqld]
12 #Do not delete next line. Used for setting port when run as service
13 # {service_port}
14 bind-address=127.0.0.1
15 # server-id = 1 Comment Prevents error Cannot open table mysql/slave_master_info
16 server-id = 0
17 pid-file=mysql.pid
18 explicit_defaults_for_timestamp
19 #default-storage-engine=MYISAM
20 authentication_policy = caching_sha2_password
21
22 skip-external-locking
23 key_buffer_size = 16K
24 max_allowed_packet = 1M
25 table_open_cache = 4
26 sort_buffer_size = 64K
27 read_buffer_size = 256K
28 read_rnd_buffer_size = 256K
29 net_buffer_length = 2K
30 thread_stack = 256K
31
32 character-set-server=utf8mb4
33
34 # federated
35 skip-federated
36
37
38 # Uncomment the following if you are using InnoDB tables
39 innodb_file_per_table = 1
40 innodb_data_file_path = ibdata1:10M:autoextend
41 innodb_buffer_pool_size = 32M
42 innodb_redo_log_capacity = 100M
43 innodb_log_buffer_size = 8M
44 innodb_flush_log_at_trx_commit = 1
45 innodb_lock_wait_timeout = 50
46
```

- **PHP**




```
1 [PHP]
2 ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
3 ; PHP 8.3.0 php_development.ini ;
4 ; Uniform Server Development php.ini ;
5 ; PHP Installed as Apache module ;
6 ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
7
8 ;;;;;;;;;;;;;;;;;;
9 ; About php.ini ;
10 ;;;;;;;;;;;;;;;;;;
11 ; PHP's initialization file, generally called php.ini, is responsible for
12 ; configuring many of the aspects of PHP's behavior.
13
14 ; PHP attempts to find and load this configuration from a number of locations.
15 ; The following is a summary of its search order:
16 ; 1. SAPI module specific location.
17 ; 2. The PHPRC environment variable.
18 ; 3. A number of predefined registry keys on Windows
19 ; 4. Current working directory (except CLI)
20 ; 5. The web server's directory (for SAPI modules), or directory of PHP
21 ; (otherwise in Windows)
22 ; 6. The directory from the --with-config-file-path compile time option, or the
23 ; Windows directory (usually C:\windows)
24 ; See the PHP docs for more specific information.
25 ; https://php.net/configuration.file
26
27 ; The syntax of the file is extremely simple. Whitespace and lines
28 ; beginning with a semicolon are silently ignored (as you probably guessed).
29 ; Section headers (e.g. [Foo]) are also silently ignored, even though
30 ; they might mean something in the future.
31
32 ; Directives following the section heading [PATH=/www/mysite] only
33 ; apply to PHP files in the /www/mysite directory. Directives
34 ; following the section heading [HOST=www.example.com] only apply to
35 ; PHP files served from www.example.com. Directives set in these
36 ; special sections cannot be overridden by user-defined INI files or
37 ; at runtime. Currently, [PATH=] and [HOST=] sections only work under
38 ; CGI/FastCGI.
39 ; https://php.net/ini.sections
40
41 ; Directives are specified using the following syntax:
42 ; directive = value
43 ; Directive names are *case sensitive* - foo=bar is different from FOO=bar.
44 ; Directives are variables used to configure PHP or PHP extensions.
45 ; There is no name validation. If PHP can't find an expected
46 ; directive because it is not set or is mistyped, a default value will be used.
```

- **Perl:** El archivo de configuración de Perl se ubica en:

/UniServerZ/core/perl/bin/perl.conf

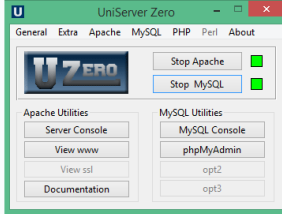
Interface panel de control general



The Uniform Server Zero XV

Welcome to The Uniform Server and this documentation, which is for the Zero series. The Uniform Server is a free and open source Windows Apache-MySQL-PHP-Perl server suite. The Uniform Server is an excellent system for both beginning webmasters and experienced developers. It is a full-power web-server suitable for production use, but small enough to carry on a USB memory stick, or even a camera's flash drive. Covered in this document is the pre-configured server (UniServer Zero 15_x_x_ZeroXV) and modules required to assemble your own bespoke server.

[Background](#)
[Installation - pre-configured server](#)
[Installation - bespoke server](#)
[Controller](#)
[Plugins](#)
[Installation Restriction](#)
[Server Paths](#)
[Help](#)
[Security](#)
[Other Issues](#)
[VS Libraries](#)
[MySQL Access](#)
[Windows and UAC](#)
[Firewalls](#)
[Skype](#)
[Where to next](#)



Background

Uniform Zero takes a fresh look at Apache, MySQL, PHP and Perl portability. Uniform Server has been redesigned from the ground up; emphasis is given to reducing code size. This is achieved through a modular implementation using plugins. Install only the plugins you require; this avoids the dreaded bloat-ware scenario. Server control is provided by UniController, a Pascal application written and compiled using Lazarus.

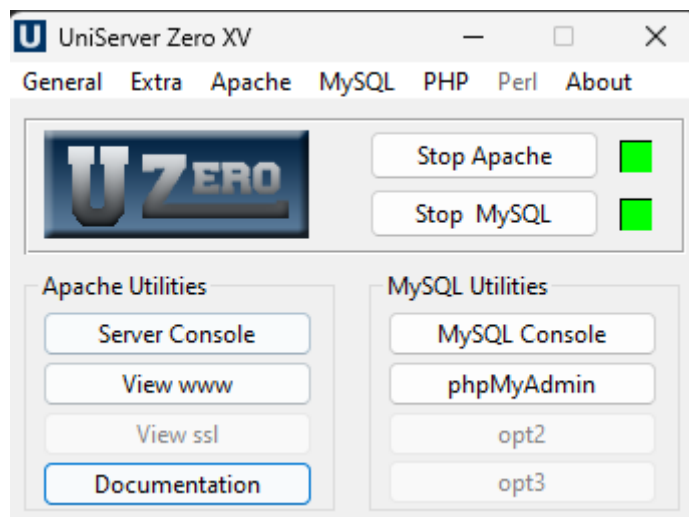
For new users, creating a bespoke server can be daunting. To address this, UniServer Zero releases 15_x_x_ZeroXV are versions with pre-installed Zero XV modules (plugins), producing a standard WAMP (Windows, Apache, MySQL and PHP) server package. This package is fully portable, allowing you to run servers from a USB memory stick.

In the context of this documentation, portability is defined as an application that does not install data in the registry on a host PC. Generally, applications ported to Windows from a Unix environment are inherently portable; for example: Apache, MySQL, PHP and Perl. These require only a few minor tweaks to run in portable mode.

Applications can be run either as a standard program or as a service; Uniform Server Zero supports both methods. Running an application as a standard program requires that application to be manually restarted after powering-up a PC and logging in. This disadvantage is resolved by optionally placing an entry in the [start-up menu](#) to provide automatic restarting after logging in. Although not portable, it is a small concession for users that require this functionality. In contrast, applications that [run as a service](#) automatically start after powering-up a PC; this is the preferred method when running a production server. Again, this is not portable; remember to uninstall services before moving servers.

Similarly, editing the Windows hosts file is not a portable operation. That said, Uniform Server Zero provides support to [manually](#) and automatically add and delete entries in this file.

We strongly suggest that you check over the points on this page, as they provide important information that may help you avoid common problems. The following two sections ([Installation - pre-configured server](#) and [Installation - bespoke server](#)) will have you up and running in seconds. A more detailed step-by-step guide is provided on the [Quick Start Guide](#) page.



Directorio raíz

La ubicación por defecto para crear las aplicaciones se encuentra en: UniServerZ\www

Se puede modificar la ubicación en el archivo de configuración de Apache:

UniServerZ\core\apache2\conf

```
<IfModule alias_module>
  # Define un alias para el directorio
  Alias /alias_module "C:\Users\rodrigo.mardel\OneDrive - Educacyl\DWES"
      # Reemplaza por tu ruta real

  # Configura las opciones del directorio
  <Directory " C:\Users\rodrigo.mardel\OneDrive - Educacyl\DWES">
      # Reemplaza por tu ruta real
      Options +Indexes +FollowSymLinks +Multiviews

      # Permite anular la configuración en archivos .htaccess dentro del directorio
      AllowOverride all

      # Permite el acceso a todos
      Require all granted
  </Directory>
</IfModule>
```

Archivo índice

El archivo por defecto para que sea encontrado sin necesidad de escribir la URL debe llamarse index.

En el archivo de configuración de apache podemos ver las extensiones permitidas.

```
#
# DirectoryIndex: sets the file that Apache will serve if a directory
# is requested.
#
<IfModule dir_module>
  DirectoryIndex index.html index.shtml index.html.var index.htm
    index.php3 index.php index.lua index.pl index.cgi
</IfModule>
```

Paneles de control

Index.php

Uniform Server

A lightweight mobile WAMP Server Solution.

ZeroXV - 15.0.2

Welcome to The Uniform Server

This test page **index.php** was served from root folder UniServerZ\www



Note: Please read manual page: [Installing your Website or Test pages.](#)

Server links

[Splash page](#) - Displays server specification and useful links.
[PhpMyAdmin.](#)
[PHP Info.](#)

Served Subdirectories

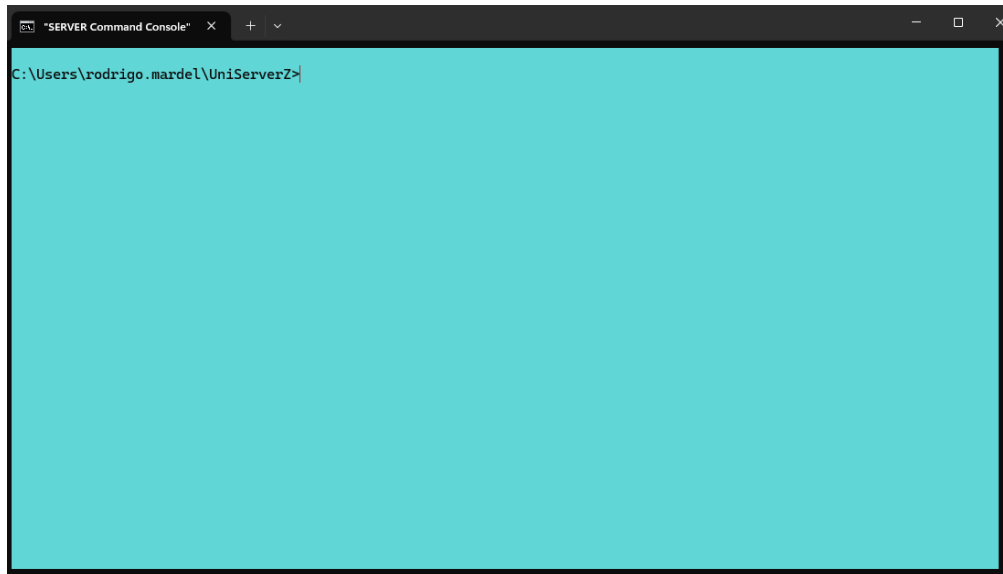
None

Served PHP Files

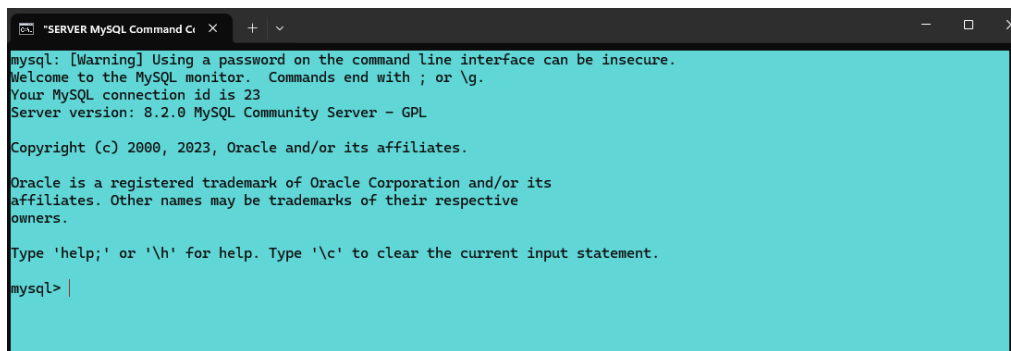
None

Developed By [The Uniform Server Development Team](#)

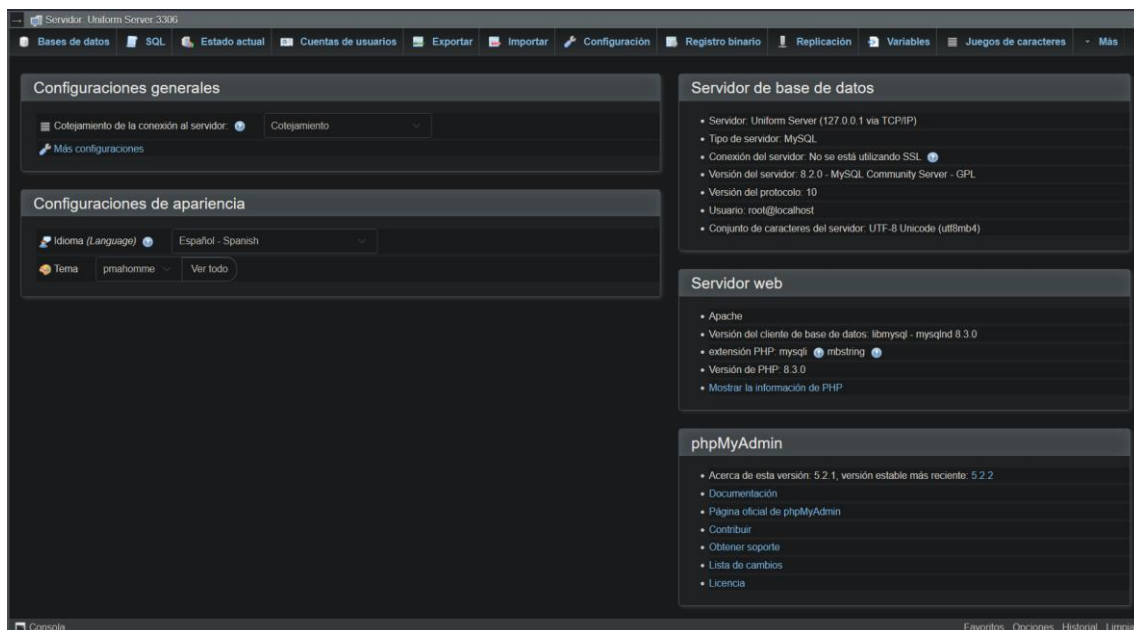
Consola del servidor



Consola MySQL



phpMyAdmin



Ejemplo de aplicación

Estructura básica MVC

```
C:\Users\rodrigo.mardel\OneDrive - Educacyl\Root_UniServerZ\DWEServidor-UniServerZ\UT6_Acceso-a-datos\MVC\ejercicios\ej1-mvc-basico>tree/f
Listado de rutas de carpetas
El número de serie del volumen es 7C7E-EF7B
C:.
  index.php
  --controller
  |   controlador.php
  |   info.txt
  --database
  |   data_base-ciclos.sql
  --lib
  |   funciones.php
  |   info.txt
  --model
  |   info.txt
  |   modelo.php
  --view
  |   elegir.php
  |   info.txt
  |   mostrar_resultado.php
  |   Nuevo Documento de texto.txt
```

Accedemos mediante la URL al directorio principal de nuestra aplicación alojada en nuestro servidor Apache.

PHP carga automáticamente el index.php, ya podemos navegar por nuestra aplicación.



En este caso se realiza una breve consulta sobre la base de datos ciclos, pasando por la estructura de carpetas definida en el MVC, esto incluye la llamada al servidor MySQL a la base de datos correspondiente para la posterior visualización.

