

# Make your IBM i...and career... **SIZZLE**

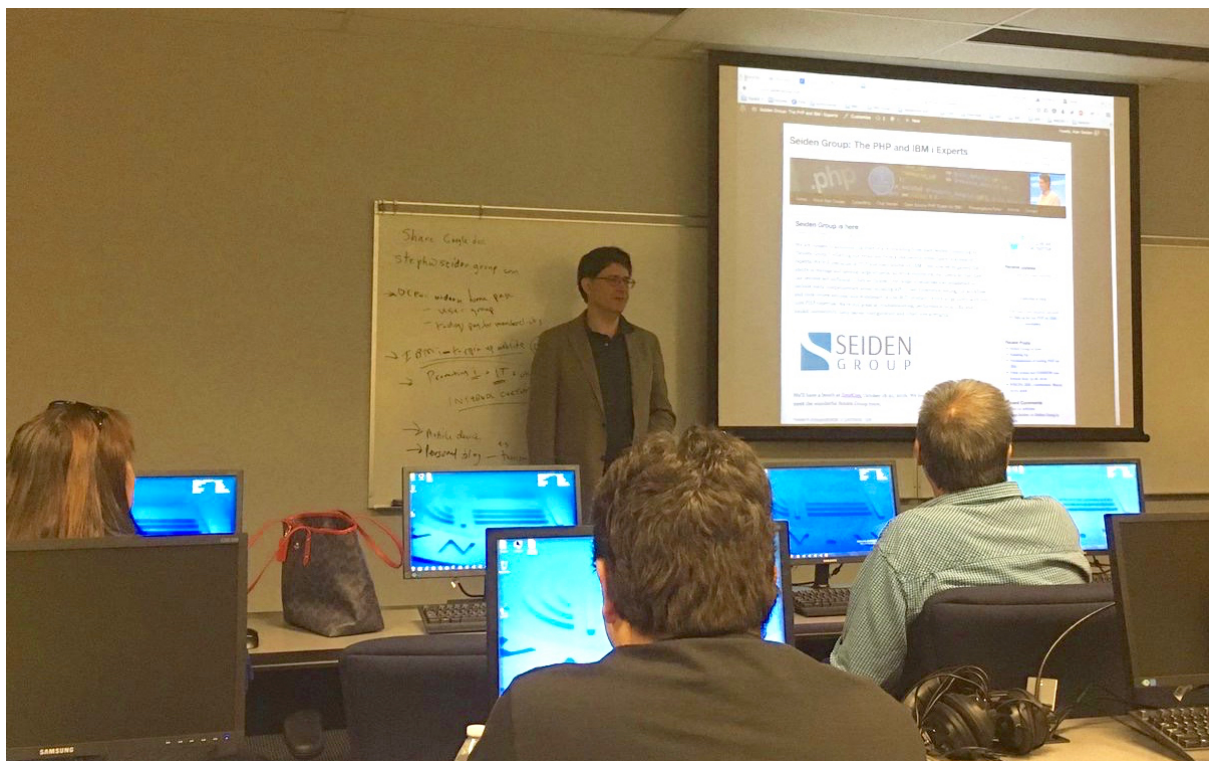
with WordPress and Drupal

Workshop at OCEAN user group, Saturday, Nov. 19, 2016



<http://seidengroup.com>

The PHP on IBM i Experts



Alan Seiden leading Nov. 19, 2016 workshop at OCEAN. Photo: Charles Guarino

## **Start with discussion of goals of the group. OCEAN members wanted to:**

- Create user group site
- Boost career with blog posts and articles
- Learn new technology
- See what IBM i could do
- Provide forum for executives to share company news
- Create portals with business information
- More...

MariaDB is new version of MySQL-compatible database on IBM i. It will be created by Zend for IBM.

It's still in an early stage...in future will get MariaDB once it's fully formed.

MariaDB beta installation “Check the i”

[http://downloads.zend.com/zend-dbi/10.1.12/ZMARIADB-10.1.12\\_0.zip](http://downloads.zend.com/zend-dbi/10.1.12/ZMARIADB-10.1.12_0.zip)



## **Zend Server**

Zend Server 8.55 (PHP 5.6) is official release.

<http://www.zend.com/en/products/server/downloads#IBM%20i>

Zend Server 9 (PHP 7) is beta release, OK for this class

<http://repos.zend.com/zend-server/early-access/zs901-php7-ibmi/>

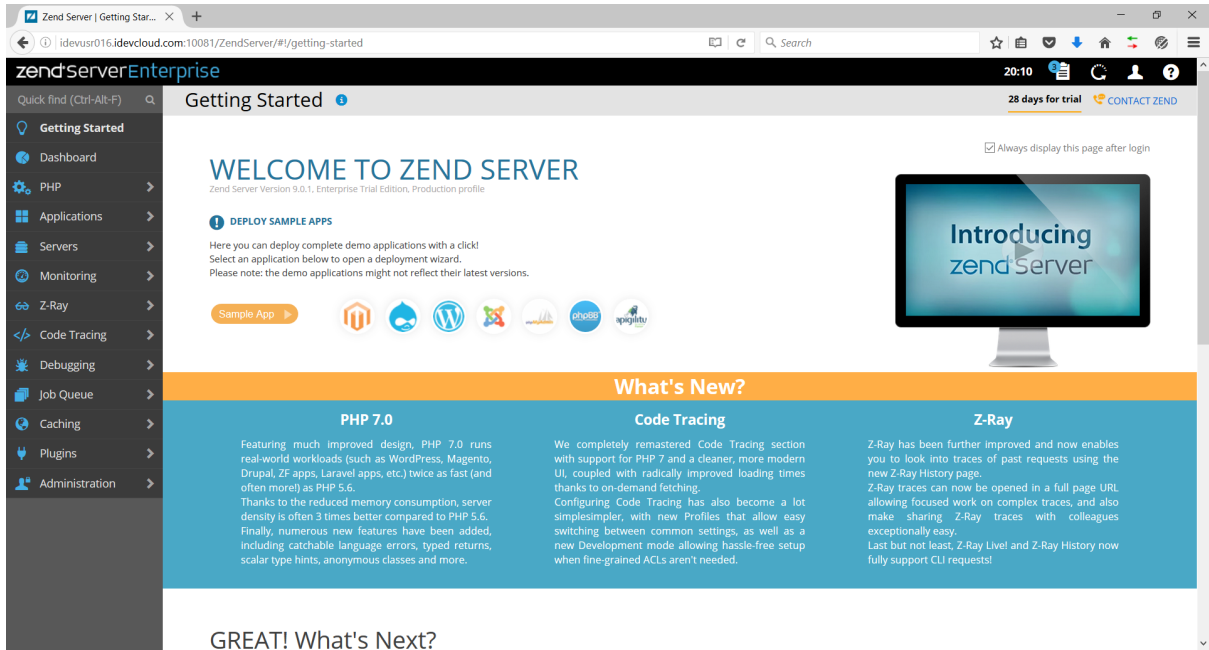
Install Zend Server 9 if you don't have Zend Server installed already.

BETA, just for this class. Includes MySQL.

If you later install Zend Server 9 GA, you'll need to uninstall the beta first.

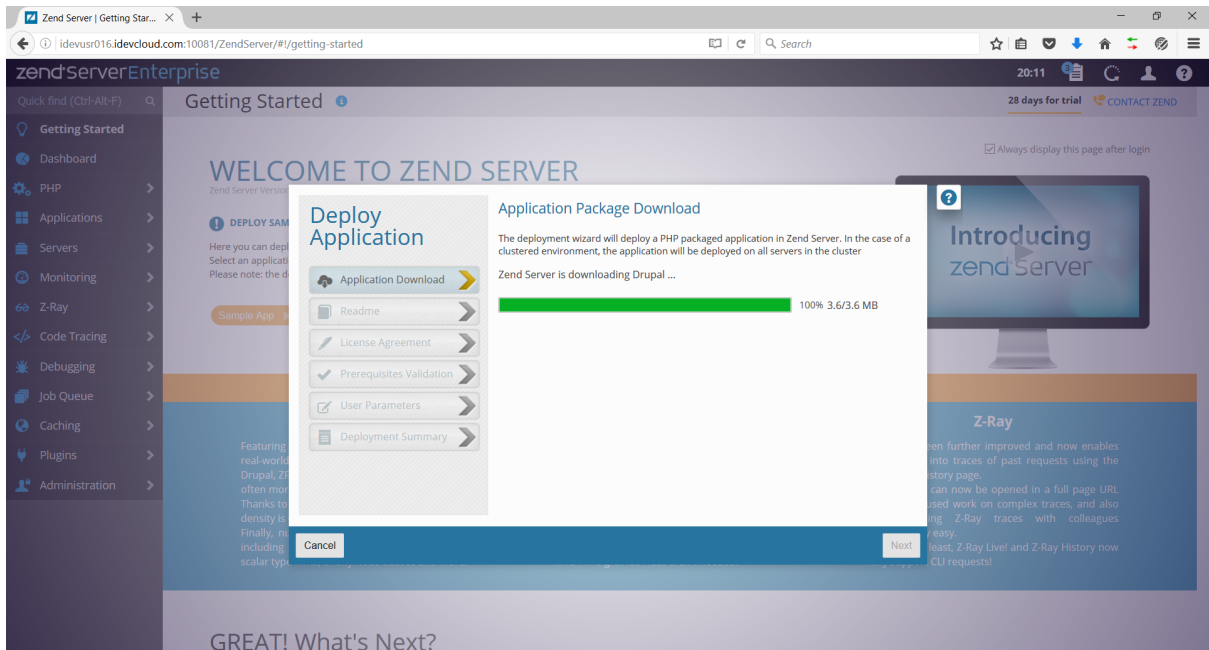
Subsystem/lib: ZENDPHP7

<http://ipaddress:10091/ZendServer>



## Drupal deployment on IBM i from Zend Server

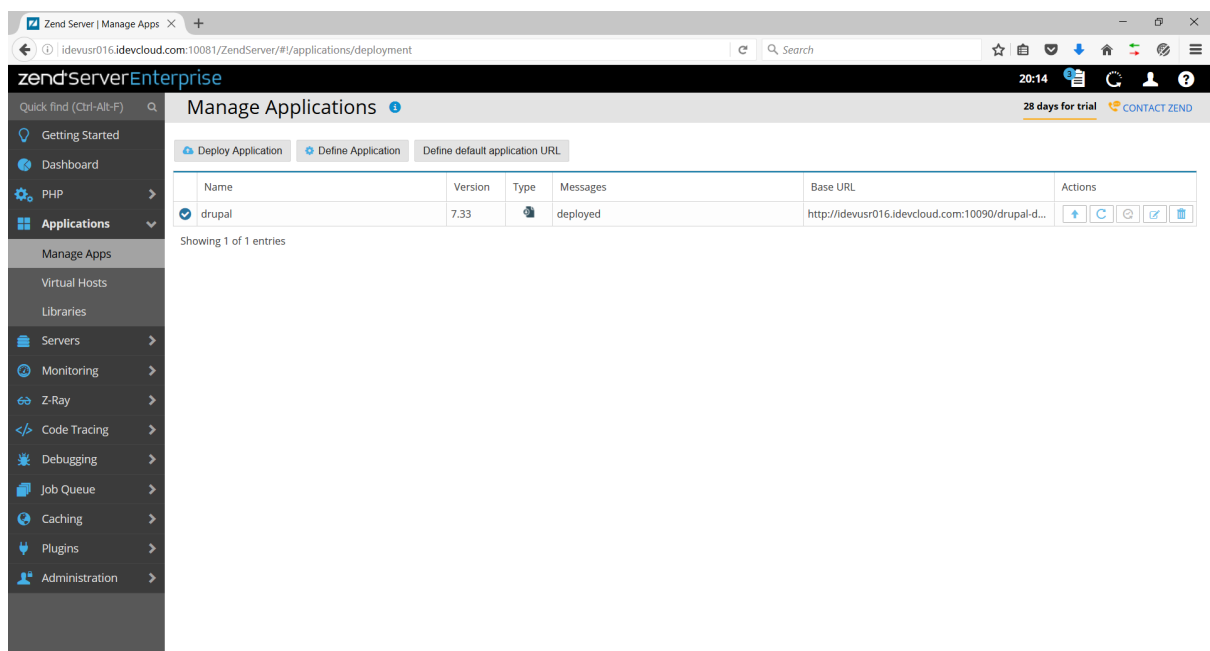
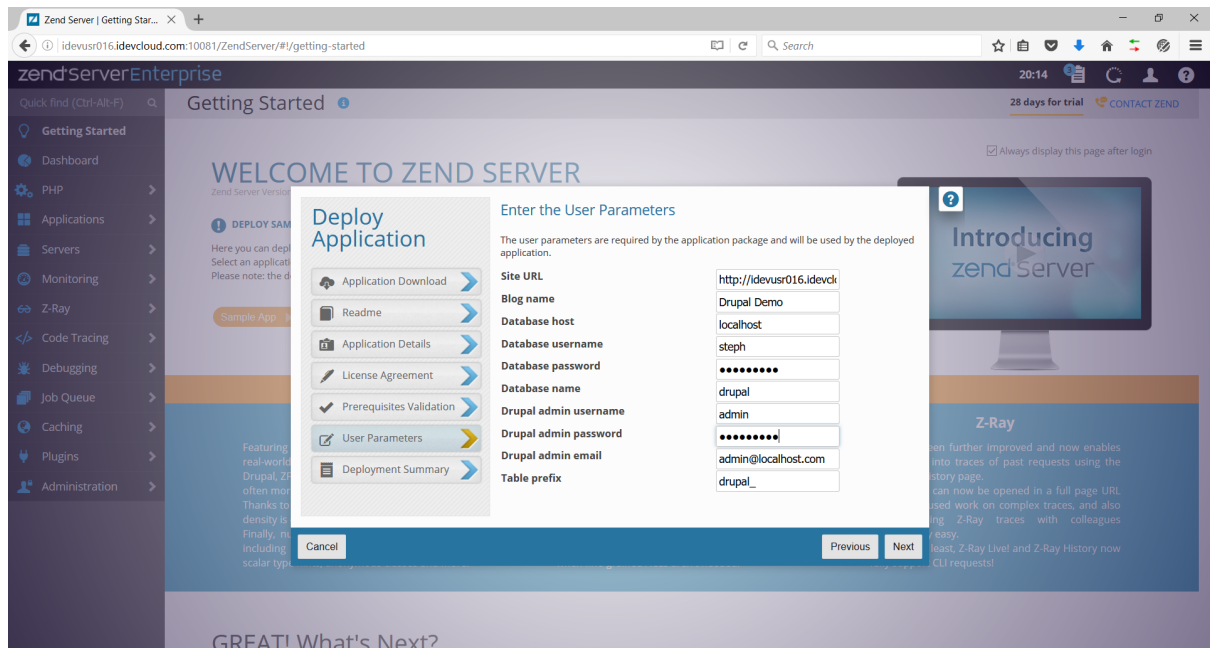
Click the drupal icon





## Drupal installation, continued

Enter your mysql created user:

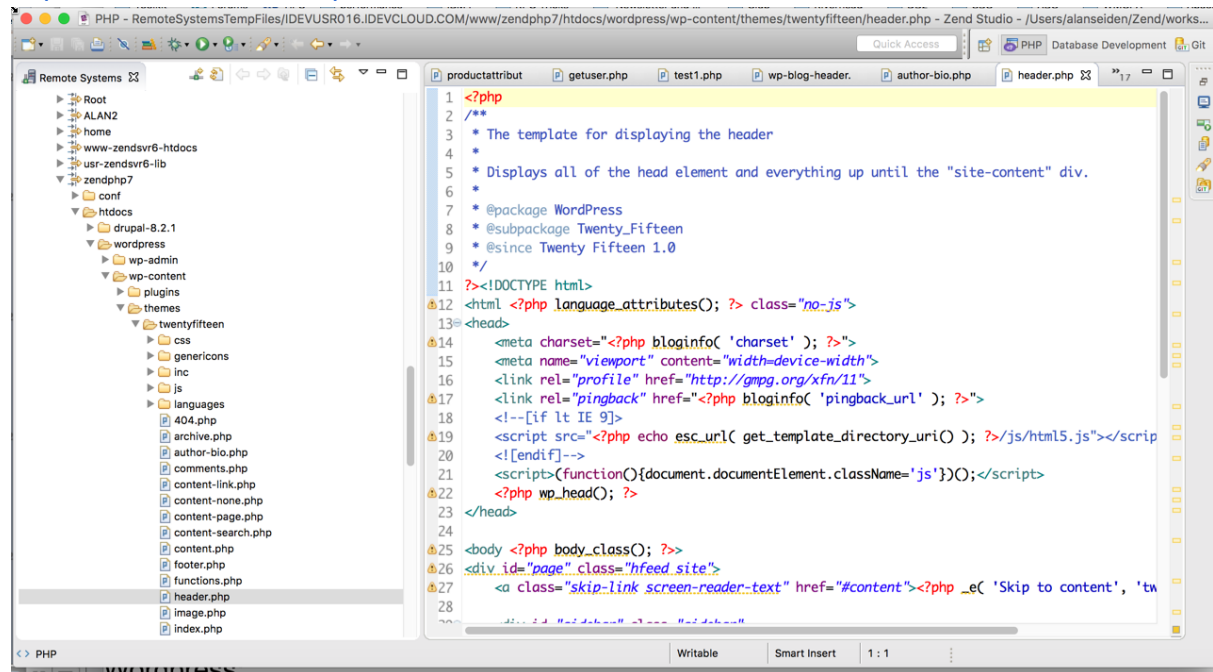


Drupal demo: <http://idevusr016.idevcloud.com:10080/drupal-demo/?q=node>

IDE....Zend Studio, Notepad++, PHP Storm

Zend Studio download here (free for IBM i users with one year of updates):

<http://www.zend.com/en/products/studio/downloads>



```
1 <?php
2 /**
3  * The template for displaying the header
4  *
5  * Displays all of the head element and everything up until the "site-content" div.
6  *
7  * @package WordPress
8  * @subpackage Twenty_Fifteen
9  * @since Twenty Fifteen 1.0
10 */
11 <?php doctype html>
12 <html <?php language_attributes(); ?> class="no-js">
13 <head>
14 <meta charset="<?php bloginfo( 'charset' ); ?>">
15 <meta name="viewport" content="width=device-width">
16 <link rel="profile" href="http://gmpg.org/xfn/11">
17 <link rel="pingback" href="<?php bloginfo( 'pingback_url' ); ?>">
18 <!--[if lt IE 9]>
19 <script src="<?php echo esc_url( get_template_directory_uri() ); ?>/js/html5.js"></scrip
20 <![endif]-->
21 <script>(function(){document.documentElement.className='js'});</script>
22 <?php wp_head(); ?>
23 </head>
24
25 <body <?php body_class(); ?>
26 <div id="page" class="hfeed site">
27 <a class="skip-link screen-reader-text" href="#content"><?php _e( 'Skip to content', 'tw
28
```

## Wordpress

Hosting options for Wordpress:

- Local PC (XAMPP, [apachefriends.org](http://apachefriends.org))
- Shared host (e.g. BlueHost)
- Wordpress.com (free or premium)
- IBM i ([wordpress.org](http://wordpress.org) download)

To install Wordpress on IBM i:

Download Wordpress 4.1 from <https://wordpress.org/download/release-archive/>

Unzip and then FTP to your document root (e.g. /www/zendphp7/htdocs)

Change wp-config-sample.php to wp-config.php

Add database configuration

```
*
* This file has the following configurations: MySQL settings, Table Prefix,
* Secret Keys, and ABSPATH. You can find more information by visiting
* (@link http://codex.wordpress.org/Editing_wp-config.php Editing wp-config.php)
* Codex page. You can get the MySQL settings from your web host.
*
* This file is used by the wp-config.php creation script during the
* installation. You don't have to use the web site, you can just copy this file
* to "wp-config.php" and fill in the values.
*
* @package WordPress
*/

/** MySQL settings - You can get this info from your web host ** //
/** The name of the database for WordPress */
define('DB_NAME', 'wpdemo');

/** MySQL database username */
define('DB_USER', 'steph');

/** MySQL database password */
define('DB_PASSWORD', 'zendadmin');

/** MySQL hostname */
define('DB_HOST', 'localhost');

/** Database Charset to use in creating database tables. */
define('DB_CHARSET', 'utf8');

/** The Database Collate type. Don't change this if in doubt. */
define('DB_COLLATE', '');

/**#@+
 * Authentication Unique Keys and Salts.
 *
 * Change these to different unique phrases!
 * You can generate these using the (@link https://api.wordpress.org/secret-key/1.1/salt/ WordPress.org secret-key service)
 * You can change these at any point in time to invalidate all existing cookies. This will force all users to have to log in again.
 *
 * @since 2.6.0
 */
define('AUTH_KEY', 'put your unique phrase here');
```

Now run the WordPress installation script. You'll be able to change these settings later if needed. You'll create the Wordpress admin password for logging into Wordpress.

Installation URL on our demo system:

<http://idevusr016.idevcloud.com:10080/wordpress/wp-admin/install.php>

Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Don't worry, you can always change these settings later.

Site Title: WordPress Demo

Username: admin  
Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password, twice: [masked]  
A password will be automatically generated for you if you leave this blank.  
Very weak  
Hint: The password should be at least seven characters long. To make it stronger, use upper and lower case letters, numbers, and symbols like ! ? \$ % \* & .

Your E-mail: alan@seidengroup.com  
Double-check your email address before continuing.

Privacy:  Allow search engines to index this site.

Install WordPress

Public site URL on demo system: <http://idevusr016.idevcloud.com:10080/wordpress/>

Admin page: <http://idevusr016.idevcloud.com:10080/wordpress/wp-admin>

## Plugins

[https://codex.wordpress.org/Managing\\_Plugins](https://codex.wordpress.org/Managing_Plugins)

Browse here: <https://wordpress.org/plugins/>

Automatic vs. manual installation

Manual steps:

1. Download your WordPress Plugin to your desktop.
2. If downloaded as a zip archive, extract the Plugin folder to your desktop.
3. Read through the "readme" file thoroughly to ensure you follow the installation instructions.
4. With your FTP program, upload the Plugin folder to the wp-content/plugins folder in your WordPress directory online.
5. Go to [Plugins](#) screen and find the newly uploaded Plugin in the list.
6. Click **Activate** to activate it.

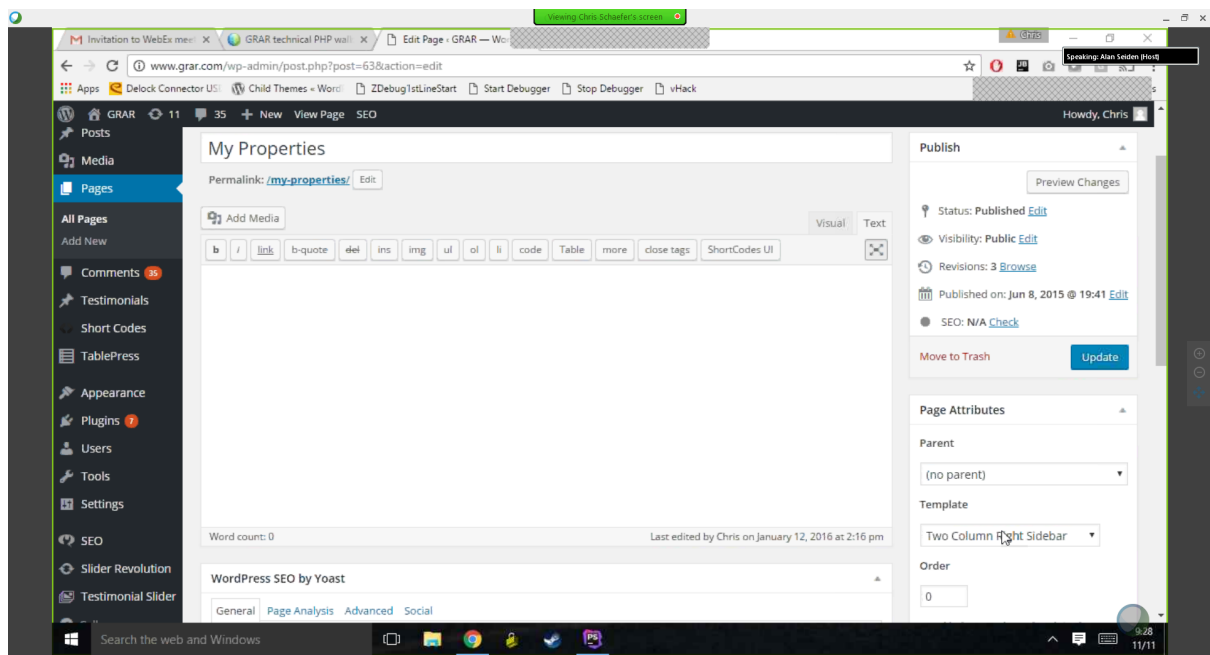


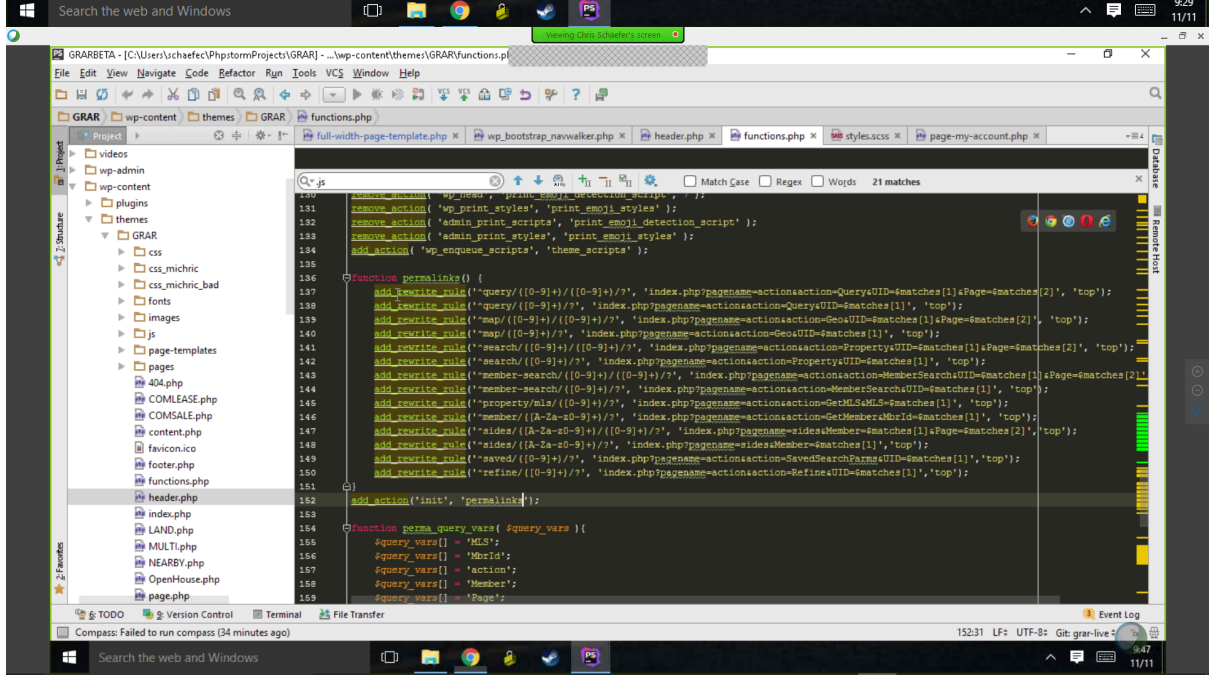
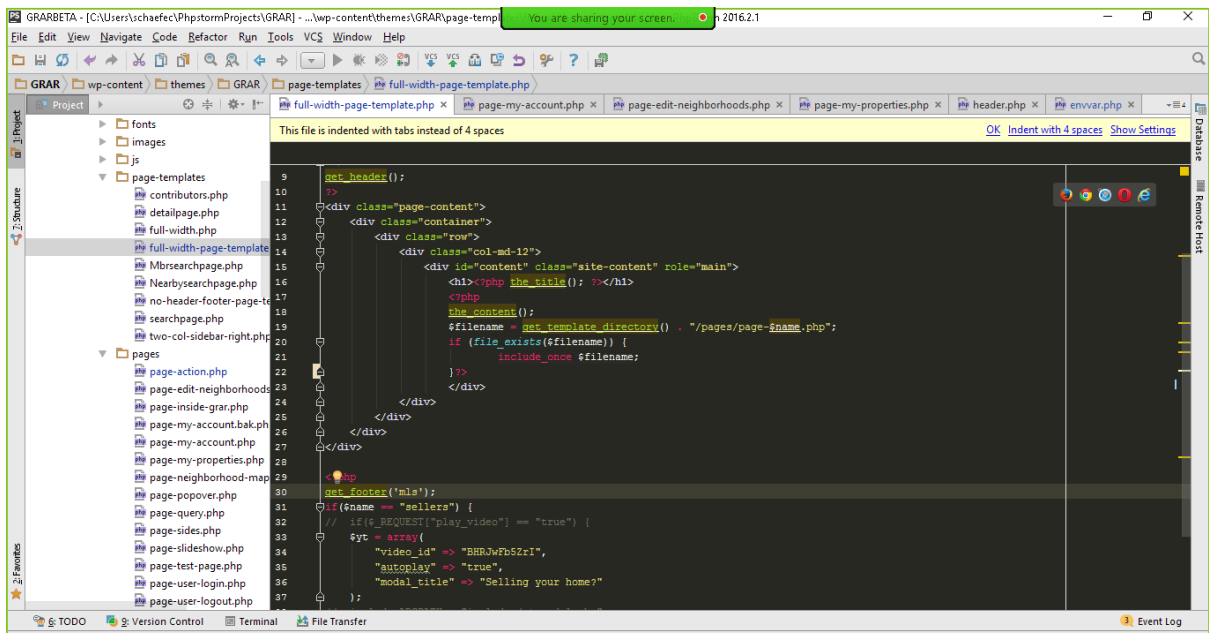
Consider these plugins:

- WordFence Security
  - <https://wordpress.org/plugins/wordfence/>
  - Protects against brute force attacks, try to guess admin pw etc.
  - Chapter 5 of Peter Macintyre's book
- Akismet spam stopper for blog comments
  - <https://wordpress.org/plugins/akismet/>
- Includeme (include external file, such as PHP/DB2 etc in pages)
  - <https://wordpress.org/plugins/include-me/>
  - [includeme file="?????.php"]
  -
- TablePress (used by GRAR site)

Great public site based on WordPress on IBM i that calls RPG stored procedures:  
<http://www.grar.com/>

Screen shots from GRAR site setup





References:

Book with good plugin recommendations:

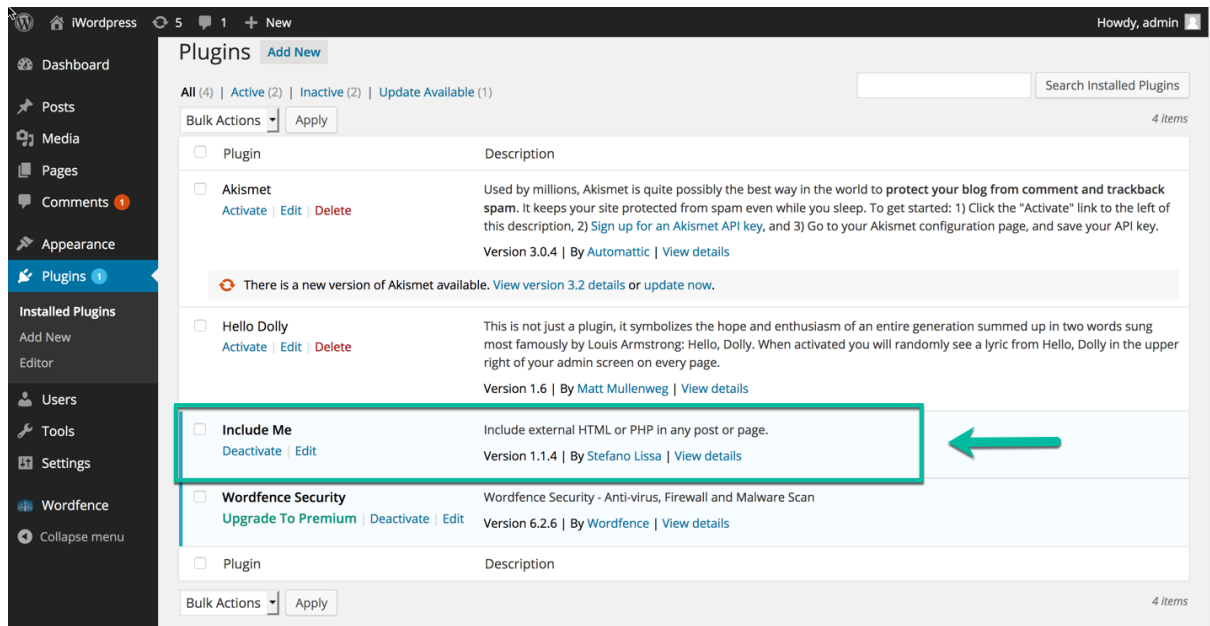
<https://www.phparch.com/books/building-exceptional-websites-with-wordpress-thesis/>

**How WordPress can run your custom PHP script that leverages DB2 Services**

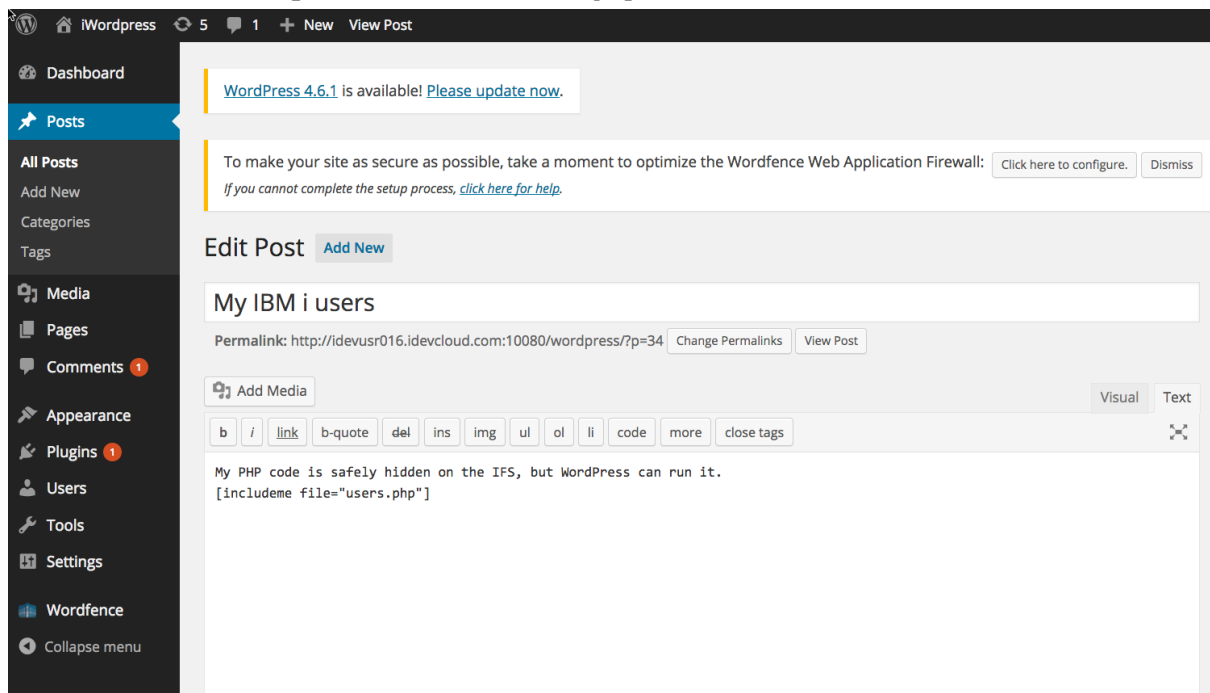
Live demo: <http://idevusr016.idevcloud.com:10080/wordpress/?p=34>

Technique: Install "IncludeMe" WordPress plugin (<https://wordpress.org/plugins/include-me/>)

Screen shot of Plugins admin page:



Screen shot of My IBM i users blog post:



Content entered above on the "My IBM i users" blog post:

```
My PHP code is safely hidden on the IFS, but WordPress can run it.  
[includeme file="users.php"]
```

The Users.php PHP script referenced above (placed in the document root):

```
<?php
```

```
// for production, consider using real user and password  
$conn = db2_connect('*LOCAL', '', '');
```

```

// query DB2 Service for all enabled user profiles
$sql = "select * From QSYS2.USER_INFO WHERE STATUS = '*ENABLED'";
$stmt = db2_prepare($conn, $sql);

db2_execute($stmt);
echo "<table style=\"width:500px\">";
while ($row = db2_fetch_array($stmt))
{
    echo "<tr>";
    echo "<td>" . $row[0] . '</td>';
    echo "<td>" . $row[3] . '</td>';
    echo "<td>" . $row[4] . '</td>';
    echo "<td>" . $row[10] . '</td>';
    echo "</tr>";
}

echo "</table>";

// note: db2_close() is optional; connection automatically gets
closed at end of script
db2_close();

?>

```

The result: screen shot from demo site:

The screenshot shows a WordPress site with a dark sidebar and a white main content area. The main content area has a title 'MY IBM I USERS' and a date 'NOVEMBER 19, 2016'. Below the title is a message: 'My PHP code is safely hidden on the IFS, but WordPress can run it.' Underneath this message is a table with four columns: Username, Status, Date, and Authority. The table lists ten users, all with the status '\*ENABLED'.

ALAN	*ENABLED	2016-03-11-12.02.24.000000	*SECOFR
ALANFTP	*ENABLED	2016-11-19-11.58.08.000000	*USER
ALAN2	*ENABLED	2016-03-13-19.23.13.000000	*SYSOPR
DBUSER	*ENABLED	2016-04-11-19.08.13.000000	*PGMR
ITECHSOL	*ENABLED	2016-03-10-10.39.06.000000	*SECOFR
LDB	*ENABLED	2016-03-10-10.38.44.000000	*SECOFR
NOGROUP	*ENABLED	2016-03-21-18.53.56.000000	*USER
QANZAGENT	*ENABLED	2016-03-09-22.44.32.000000	*SYSOPR
QAUTPROF	*ENABLED	2016-03-09-22.44.31.000000	*USER