Make your IBM i Sizzle

with WordPress

SEIDEN GROUP

seidengroup.com

Seiden Group and Club Seiden

Alan is a leader and expert in PHP on IBM i; leader, Zend's PHP Toolkit for IBM i; and "Performance guru of PHP on IBM i"

Seiden Group is a team of experts available for mentoring/troubleshooting/project advice/development.

Club Seiden, ZendCon 2015

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SEIDEN GROUP

WordPress and its power

Open source giant

- Started as blog software

  - Now a true, although relatively simple, content management system (CMS)

- Popular

  - Millions of sites based on WordPress

  - Communities

- Careers launched

- PHP at its core… some Node.js now also

- Runs on all kinds of servers and IBM i

Just a blog? Website?

- Easy to add content

  - Posts—blog posts on one long page (newest on top)

  - Pages—About, Contact, Purchase, etc…

- Themes—choose a great look

- Plugins—add functionality

- Comments / Community

Examples

- nytimes.com

- USA Today

- official Star Wars blog

- Beyonce

- Xerox blogs

- seidengroup.com, godzillai5.wordpress.com (PHP Dave)

Data3
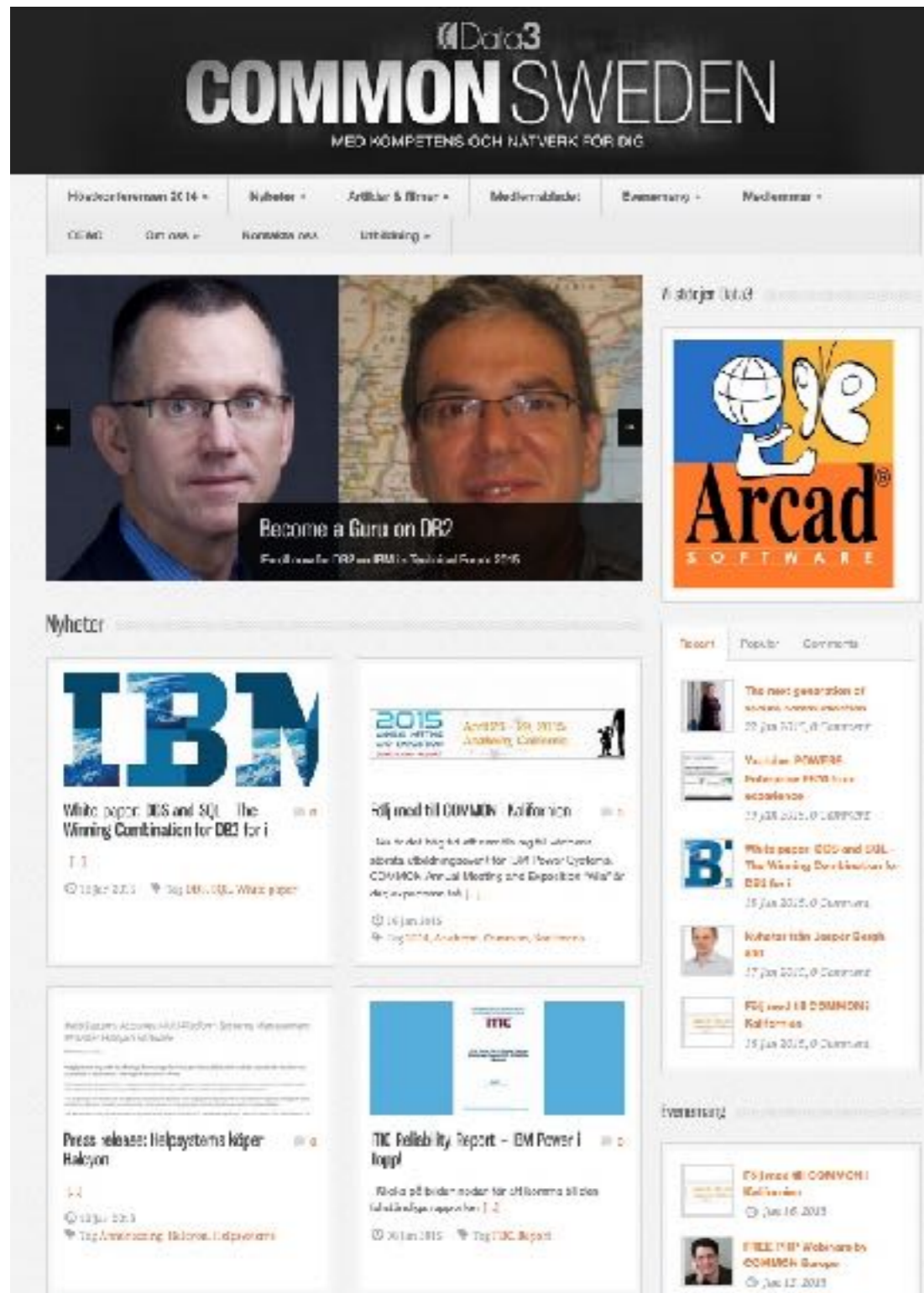
- News-style theme

- Themes are easy to download
  - **Some free, some not**

- Excellent at blogs
  but also good at general
  content management

COMMON.org
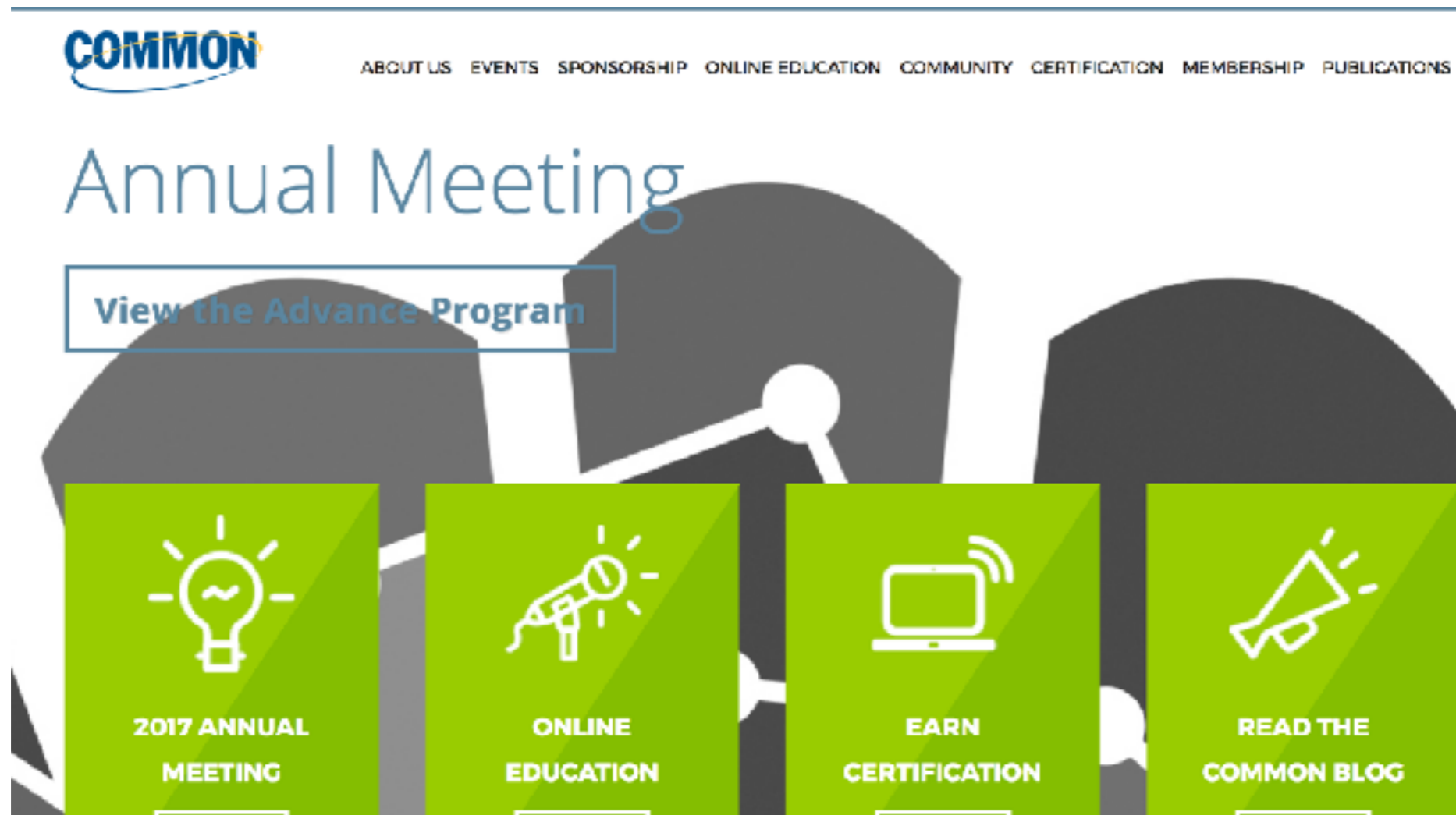
- Zend Server on IBM i

- Manages information and media

System i Developer

Community

Compare CMSes

- WordPress

  - Began with blogs

  - Can be customized but still easy to start with

- Drupal

  - "Enterprise" with sophisticated user roles and responsibilities

  - Has become like a programming framework in itself

- Joomla

  - Has lost ground but still active

  - Like Drupal lite

Goals and dreams

Your WordPress dreams

- •Let's brainstorm

- Our notes will be at

  - http://idevusr016.idevcloud.com:10080/wordpress/?p=70

Another user group's

- Create user group membership 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 of business information

Technology/install

PHP & MySQL

- PHP and MySQL are foundations many internet sites

- MariaDB is a good substitute for MySQL

- These run on most platforms, including IBM i
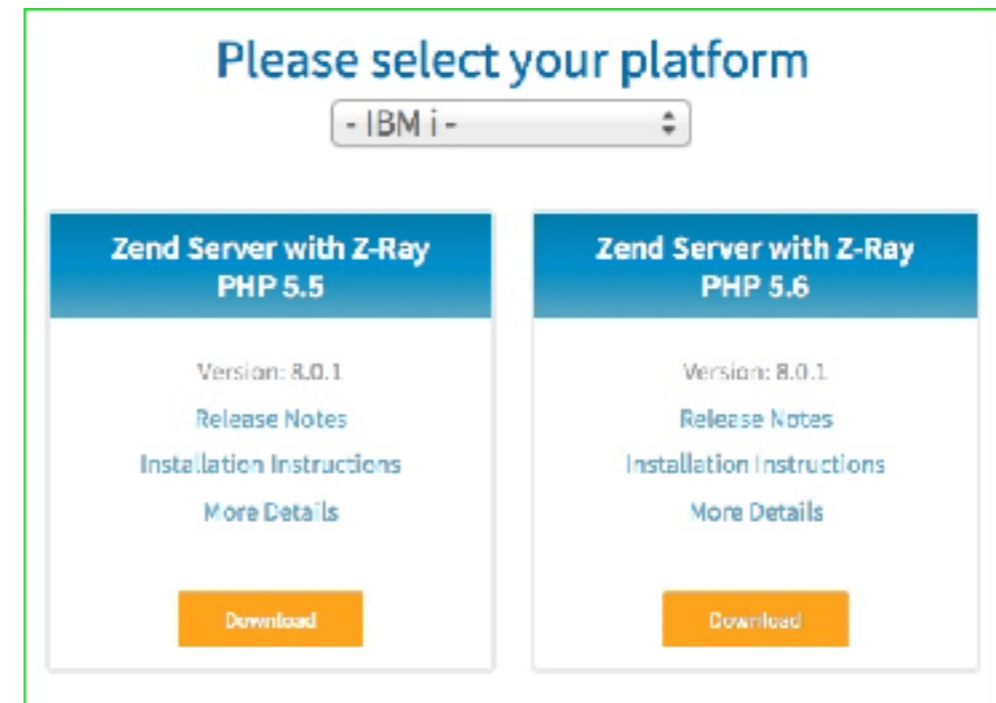
Hosting options

- Your PC

    - XAMPP PHP/MySQL download (Apachefriends.org) and others

    - Download code from wordpress.org or use packaged versions

        - Step-by-step instructions:
          https://premium.wpmudev.org/blog/setting-up-xampp/

        - **EXERCISE: install on laptop**

    - Shared hosts such as bluehost (and many others)

- wordpress.com—starting at free

- Your IBM i!

    - Get code from wordpress.org

IBM i hosting

- Install Zend Server for IBM i

- Make sure you choose to install MySQL or MariaDB

  - For standalone MySQL or MariaDB for IBM i, download from here:

  - http://www.zend.com/en/solutions/modernize-ibm-i/ibm-i-product/dbi

- Then follow instructions here

Zend Server for IBM i (8.x)

- Download Zend Server 8.x

    - http://www.zend.com/en/products/server/downloads-ibmi
        - Easy upgrade from 6.x and 7.x

- Editions

    - http://www.zend.com/en/products/server/editions

    - Basic (free), Professional, Enterprise

    - Same download, different license

Zend Server for IBM i (9.x)

- Download Zend Server 9.x

  - http://www.zend.com/en/products/server/downloads#IBM%20i
    - Includes PHP 7.1

Please select your platform

- IBM i -

NEW: Download the Zend DB package as a 100% compatible drop-in replacement for MariaDB on IBM i

**Zend Server with Z-Ray
PHP 7.1**

Version: 9.1.0

Release Notes

Installation Instructions

More Details

Download

- Editions

  - http://www.zend.com/en/products/server/editions
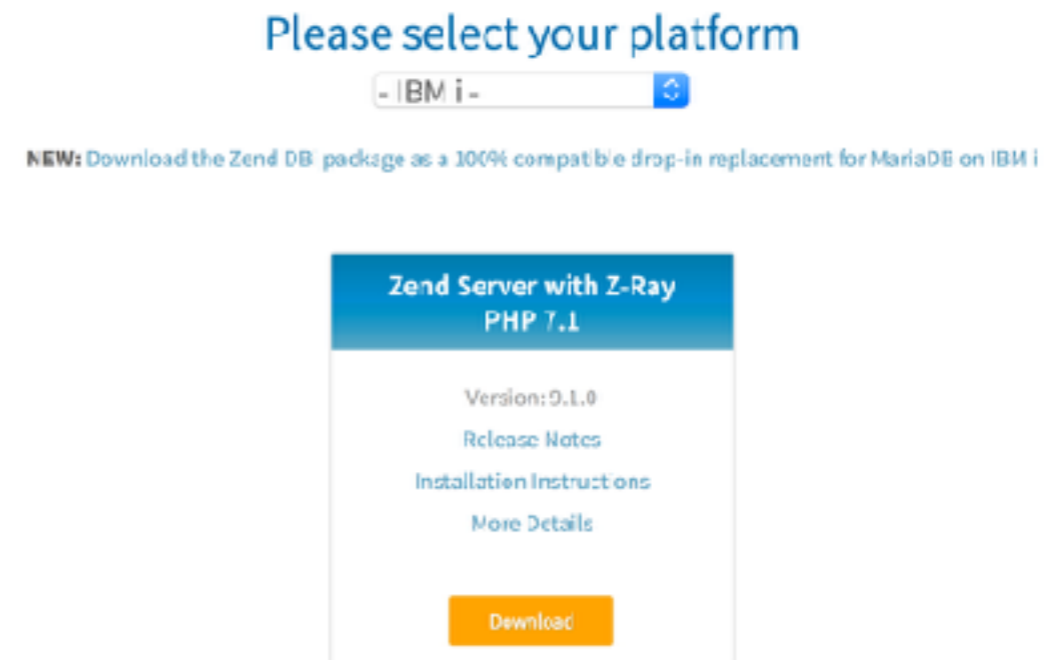
  - Basic (free), Professional, Enterprise

  - Same download, different license

Install WordPress on IBM i

- If you have older Zend Server with MySQL (not MariaDB), get **older** (Wordpress 4.1) from https://wordpress.org/download/release-archive/

- If you have newer version of ZS with MariaDB, get **newest** WordPress from https://wordpress.org/download/

- Unzip and then FTP to your document root (e.g. /www/zendsvr6/htdocs or /www/zendphp7/htdocs)

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

- Do some MySQL setup (**http://rodflohr.com/set-the-zenddbi-mysql-root-user-password/**)

  - and then configure database configuration (see next page)
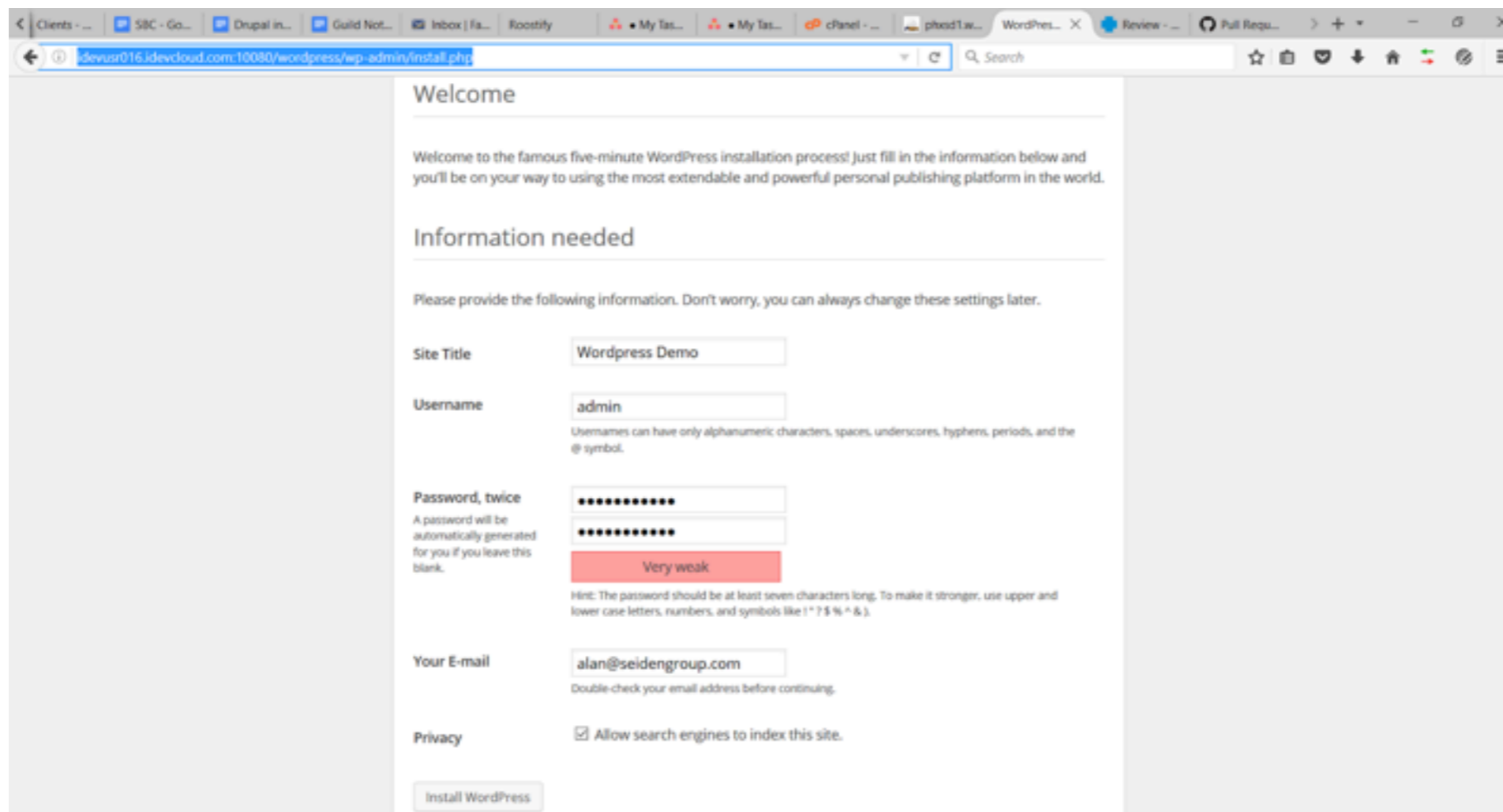
Database config in wp-config.php

Run installer

- Run the WordPress installation script from a browser.

- You'll be able to change settings later if needed. You'll create the Wordpress admin password for logging into Wordpress.

- Installation URL: http://mysite:10080/wordpress/wp-admin/install.php

Admin dashboard

- mysite.com/**wp-admin**

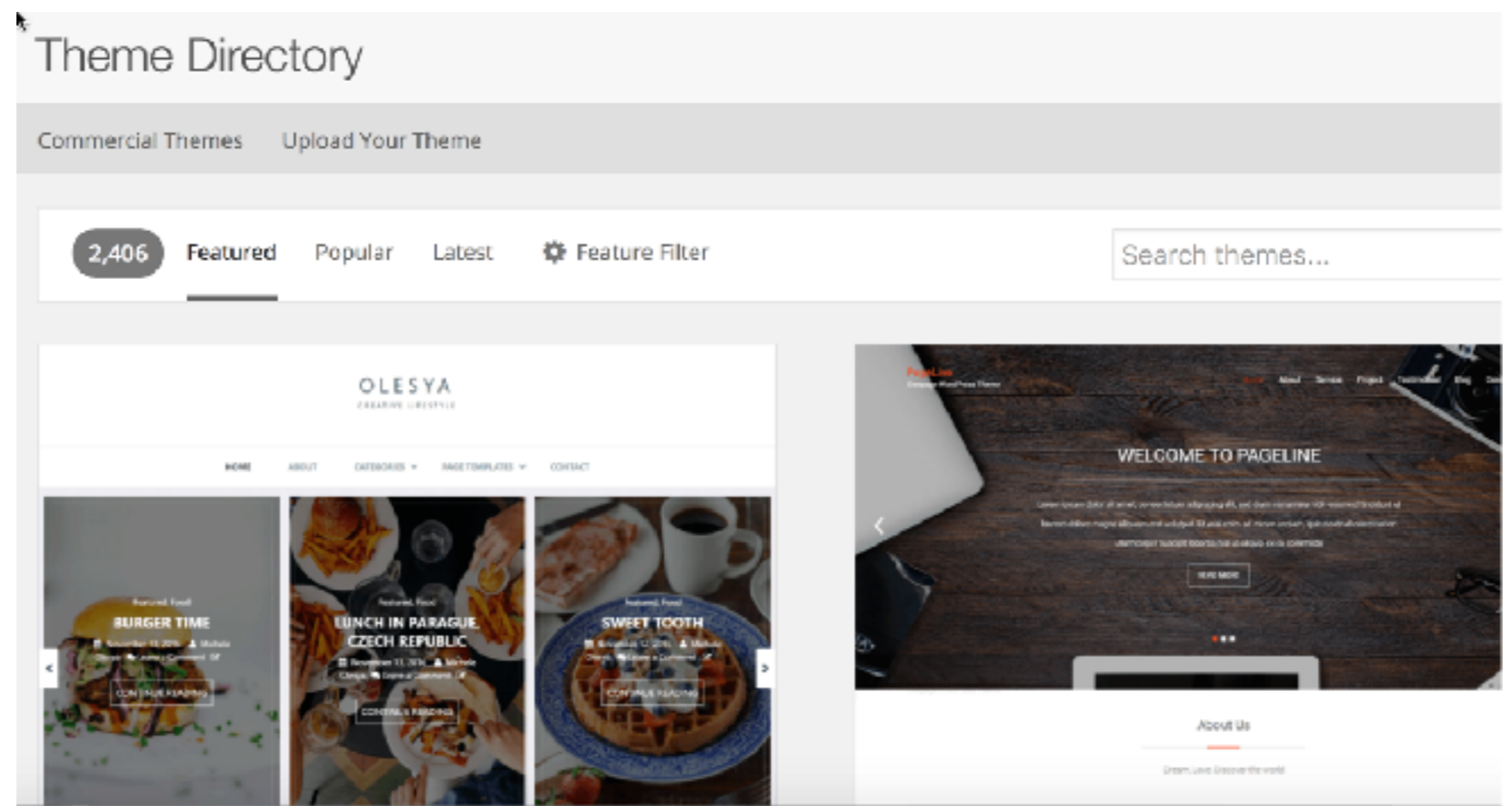# Themes

Themes create the "look"

- Change site look with no programming or designer needed

- Modern themes are "responsive"

  - Look good on desktop, tablets, phones

  - Essential for search engines and user experience

- Some are sophisticated

- For a custom look, your designer can extend existing themes

Theme admin page

Free and paid themes

- Free themes here:

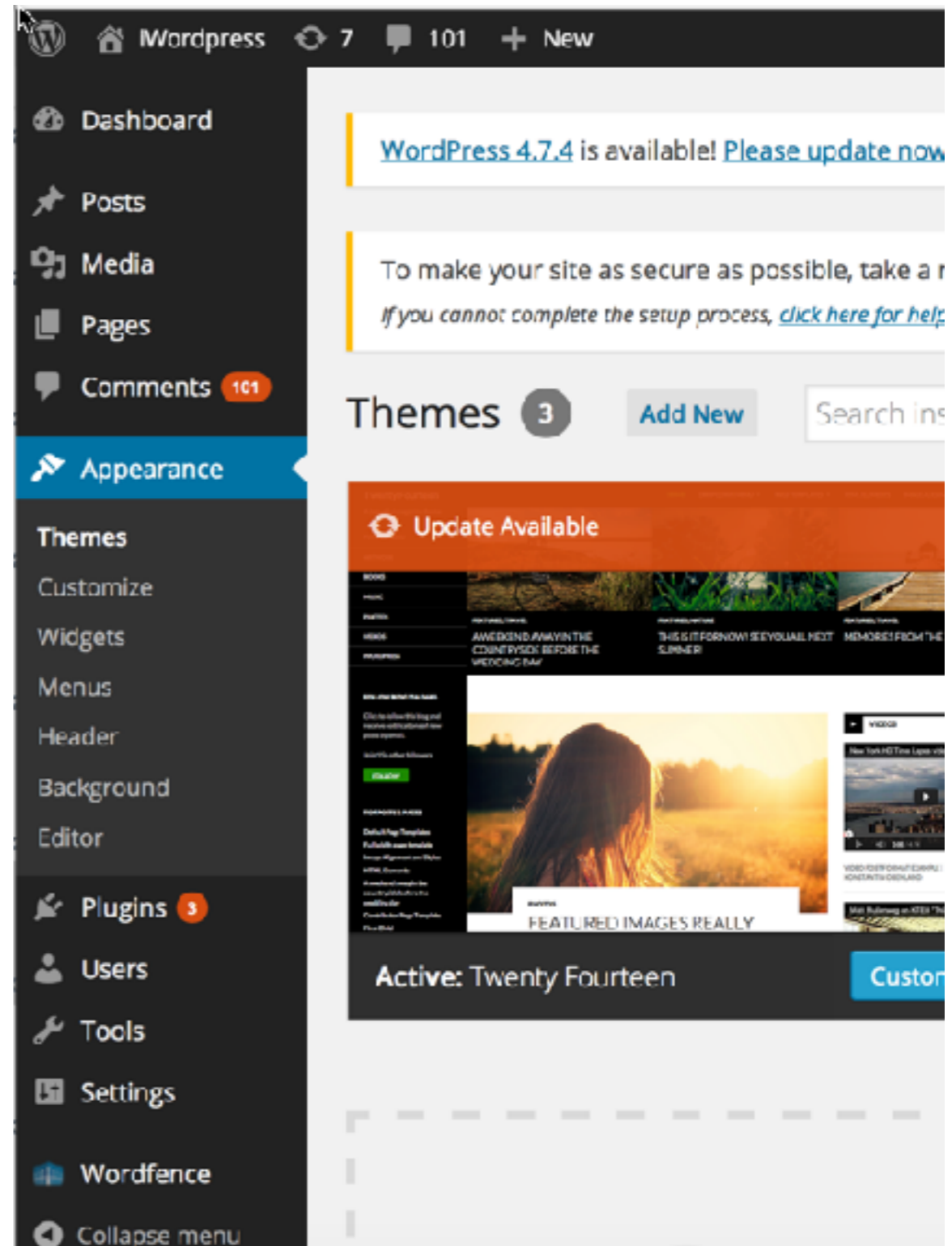 - https://wordpress.org/themes/

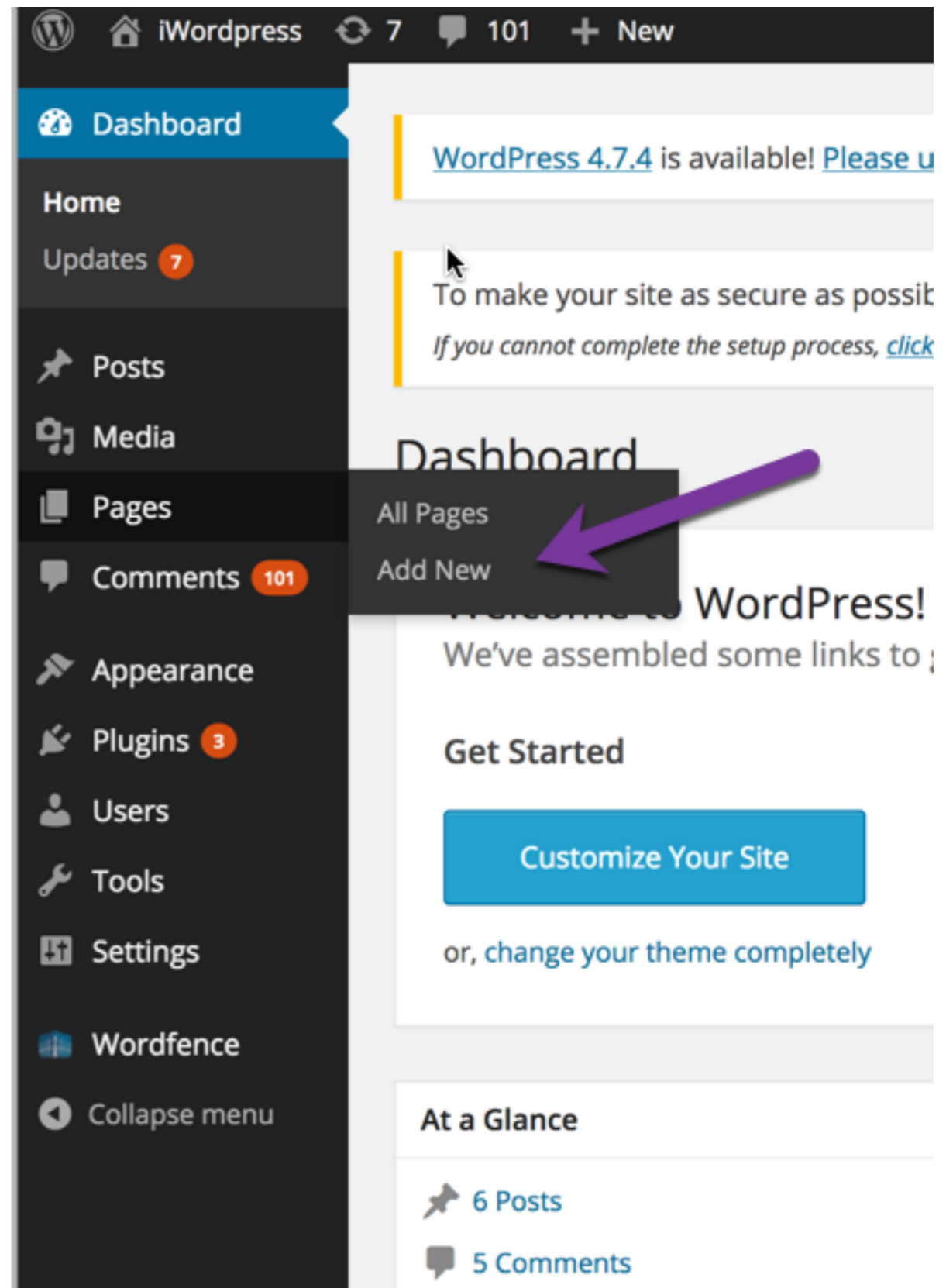- Also try Theme Forest and many more

- Huge industry

Now customize your look

- Theme

- Title

- Color

- Header image

- Widgets

Create a page, create a post

- Page: permanent, named page (e.g. About Us)
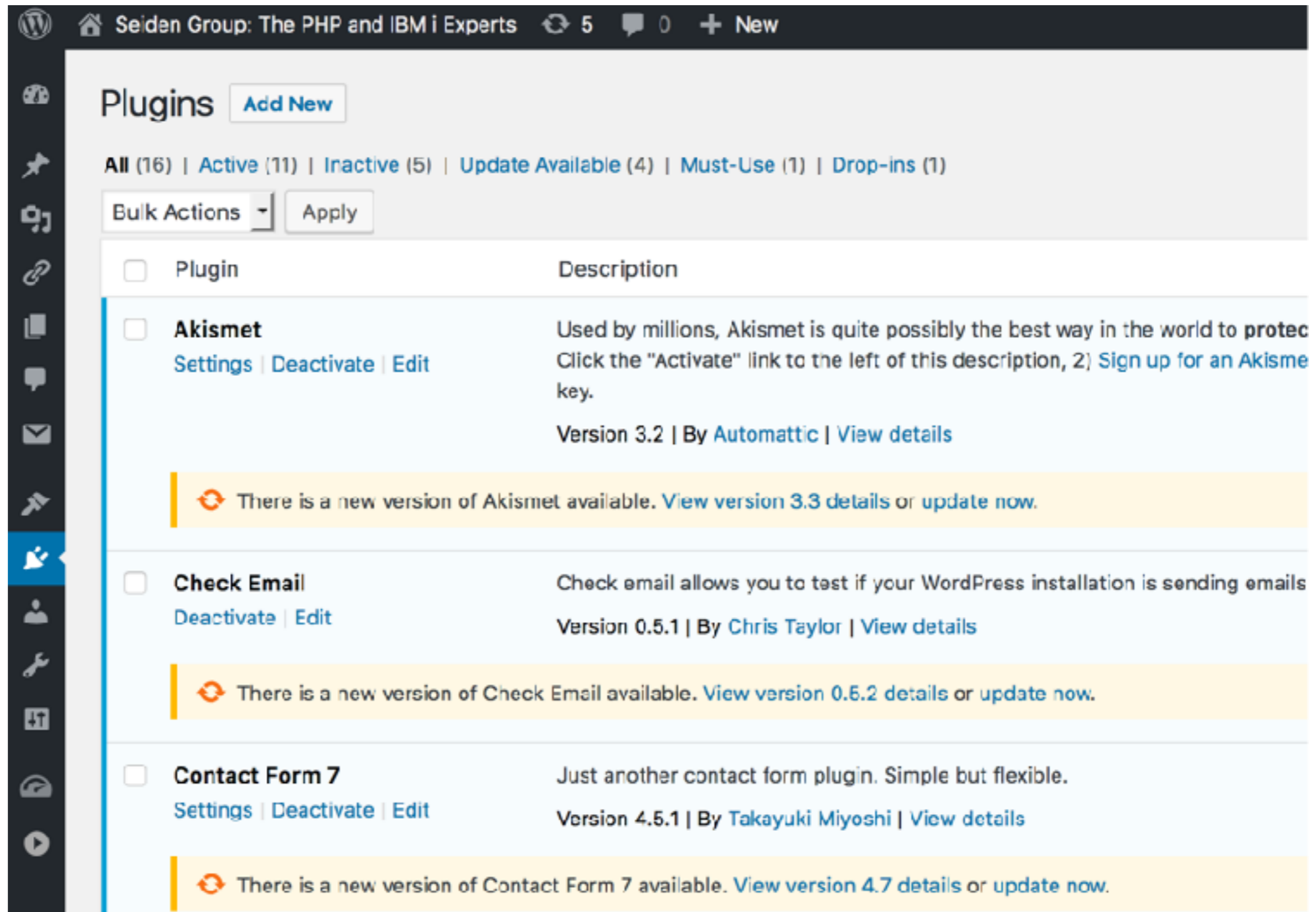
- Post: blog page will "move down" as it ages

Create a menu and add page/post

- Create top-level menu

- add your pages/posts
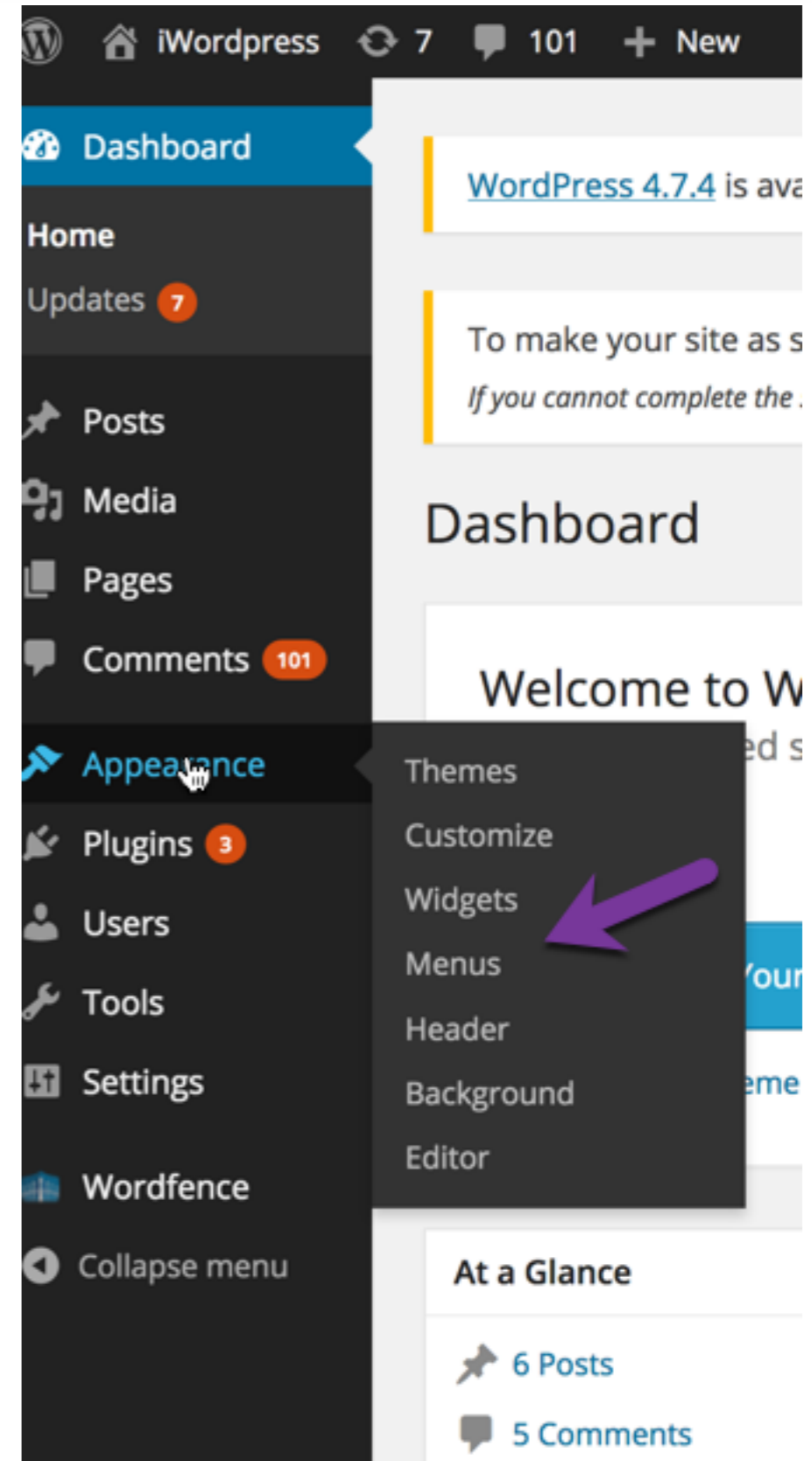
Plugins

Plugin admin page

How to get more plugins

- "Add New" from plugins page, or…..

- wordpress.org/plugins/
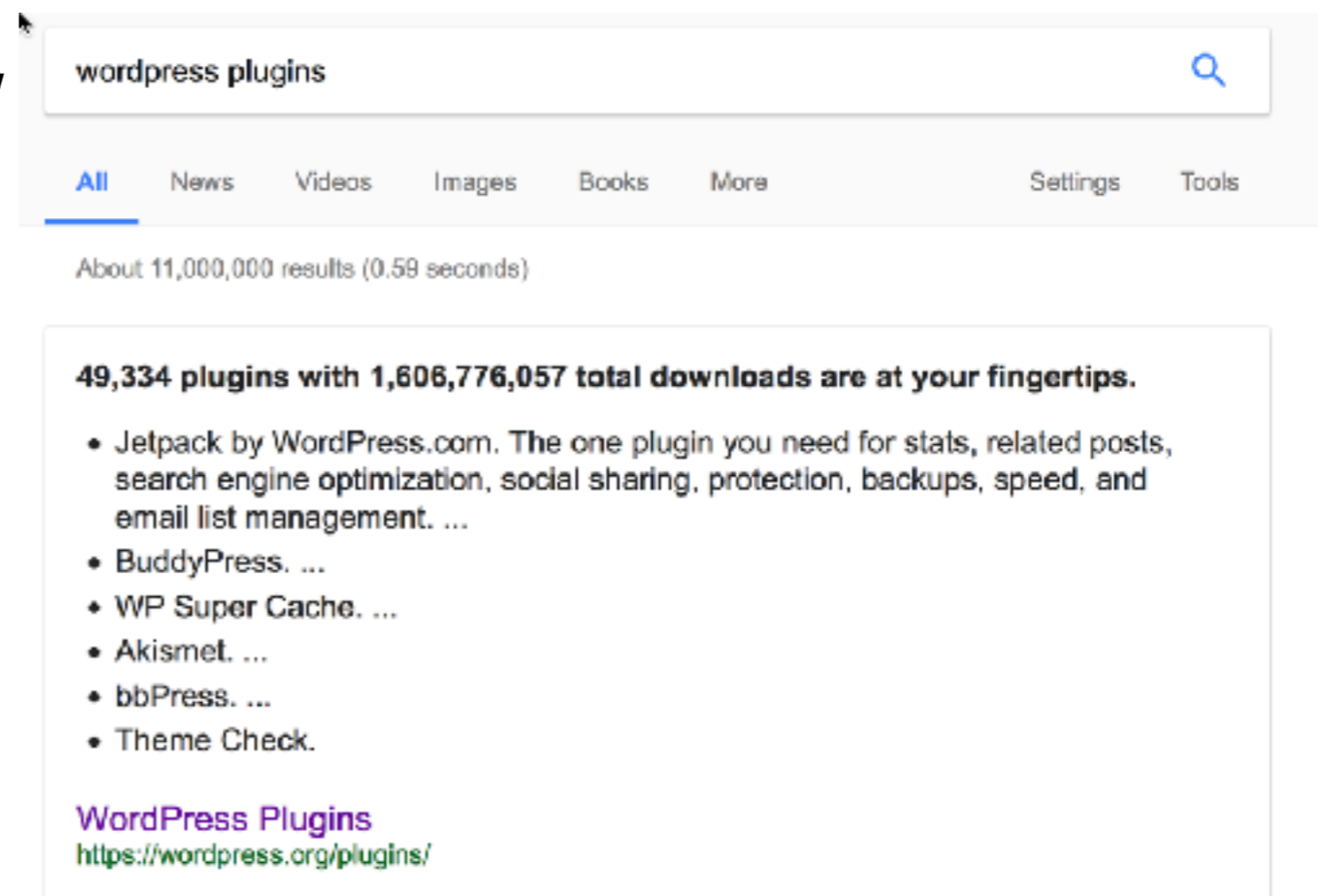
Manual installation

- Manual installation helpful if QTMHHTTP doesn't have permissions to install automatically

- Download your WordPress Plugin to your desktop.

- If downloaded as a zip archive, extract the Plugin folder to your desktop.

- Read through the "readme" file thoroughly to ensure you follow the installation instructions.

- With your FTP program, upload the Plugin folder to the wp-content/plugins folder in your WordPress directory online.

- Go to Plugins screen and find the newly uploaded Plugin in the list.

- Click Activate to activate it.

A few special plugins

- WordFence Security

- Akismet spam stopper for blog comments

- Includeme (include external file, such as PHP/DB2 etc in pages)

- TablePress to show tables in your posts

WordFence

- Security plugin

  - https://wordpress.org/plugins/wordfence/

  - Protects against brute force attacks, try to guess admin pw etc.

  - Read about WordFence in Peter Macintyre's book, *Building Exceptional Sites with WordPress & Thesis*
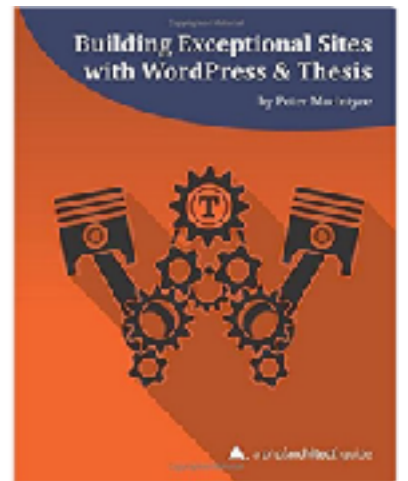
Akismet

- Stops comment spam

- https://wordpress.org/plugins/akismet/

- Use to avoid thousands of spam comments (if you allow comments)

Comments

All [194] | Pending (0) | Approved (194) | **Spam (3,214)** | Trash (18)

Bulk Actions ▾ Apply All comment types ▾ Filter Empty Spam

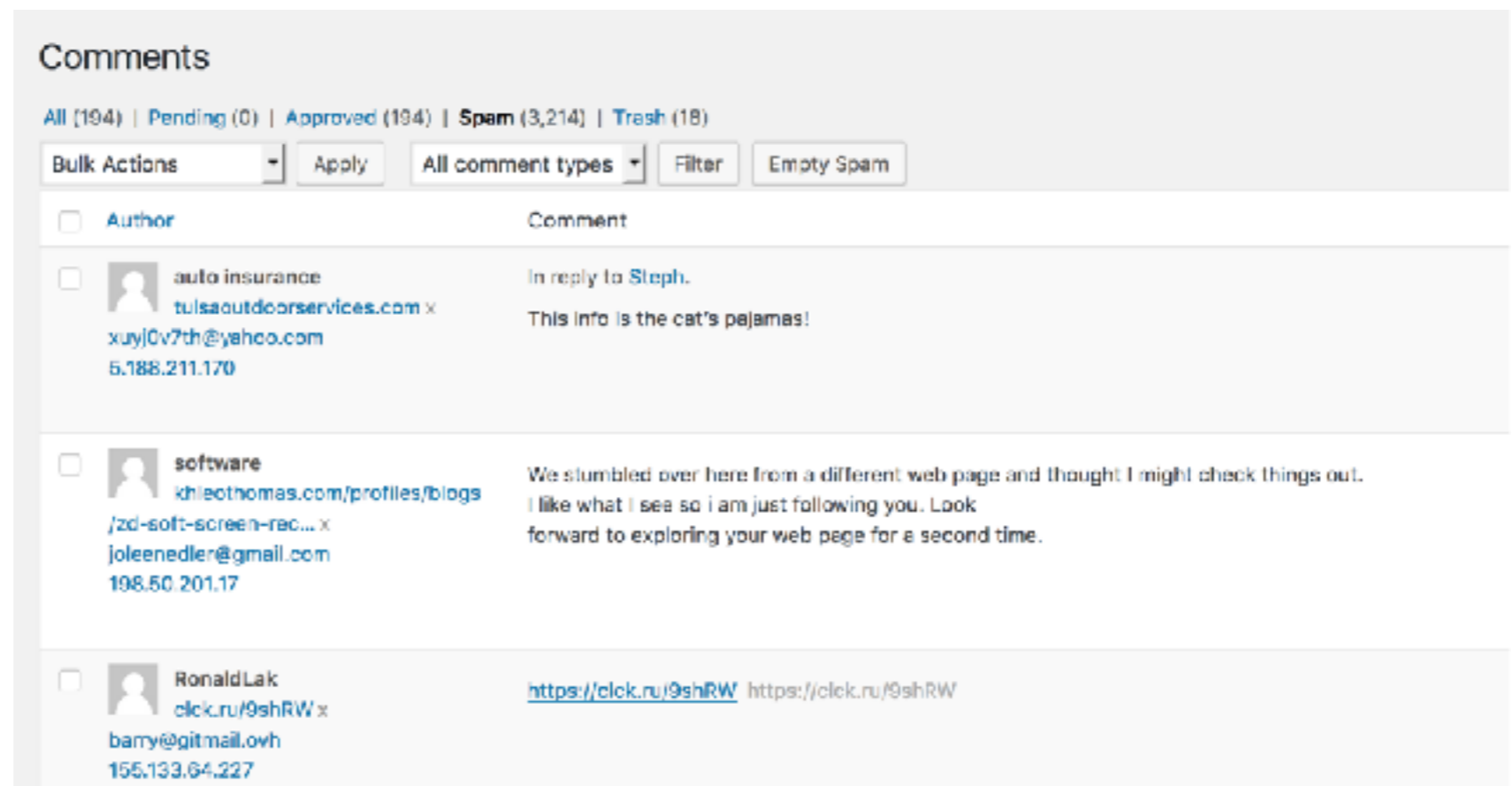|	Author	Comment
☐	auto insurance tulsaoutdoorservices.com × xuyj0v7th@yahoo.com 5.188.211.170	In reply to Steph. This info is the cat's pajamas!
☐	software khleothomas.com/profiles/blogs /zd-soft-screen-rec... × joleenedler@gmail.com 198.50.201.17	We stumbled over here from a different web page and thought I might check things out. I like what I see so i am just following you. Look forward to exploring your web page for a second time.
☐	RonaldLak click.ru/9shRW × barry@gitmail.ovh 155.133.64.227	https://click.ru/9shRW https://click.ru/9shRW

IncludeMe

- Easy way to include custom PHP

- https://wordpress.org/plugins/include-me/

- Use a "shortcode" such as
  [includeme file="users.php']
  (Provide a file name from your IFS)

- Demo soon
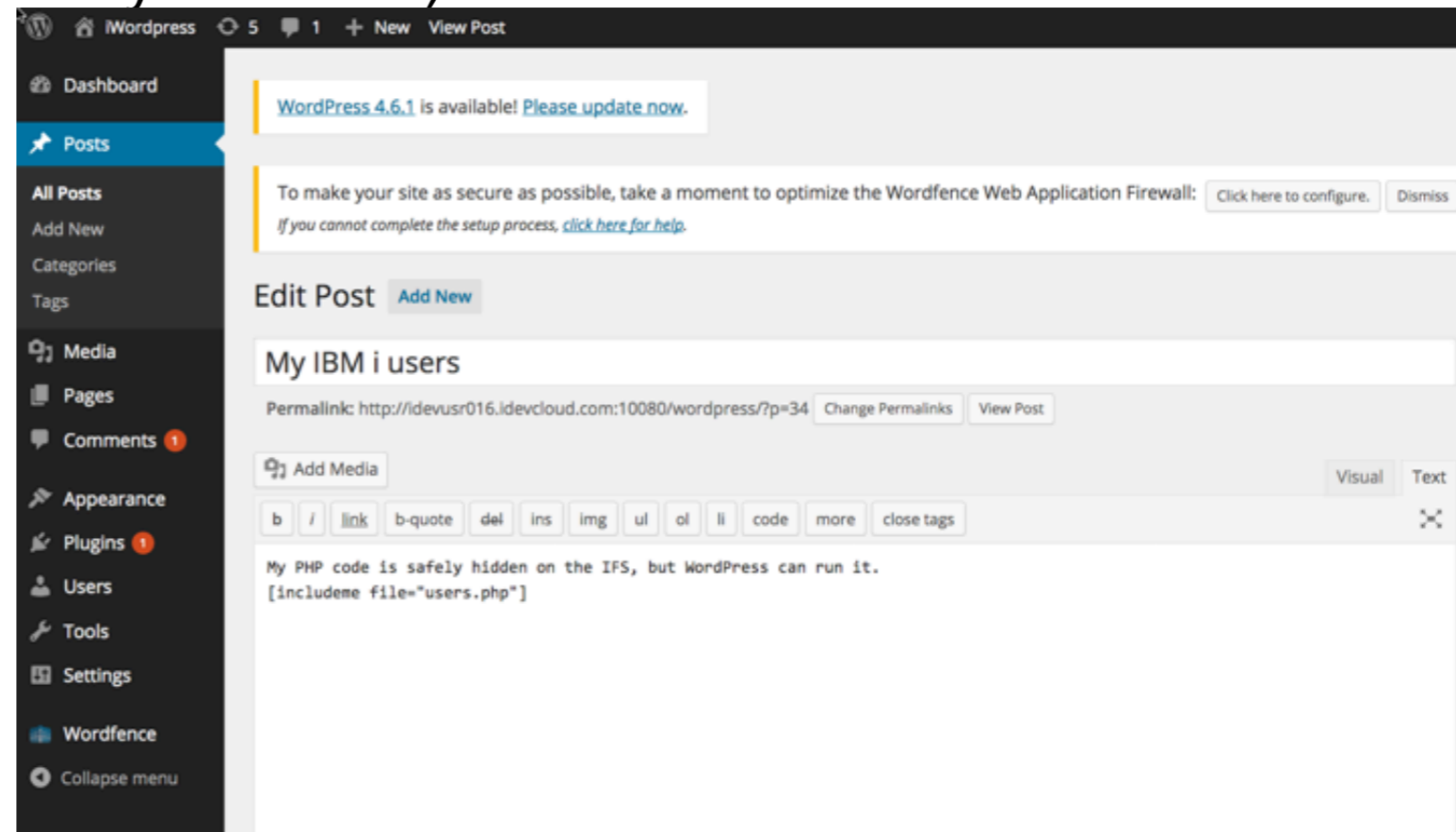
TablePress

- Display tables in your posts or pages

- Used by GRAR site

- Import/export of CSV/JSON

- Point to URLs or other files for data

TablePress Demo

This is a demo table (with fictional data), that was created with the TablePress plugin:

Show 10 entries   Search: _____

First Name ⇕	Last Name ⇕	ZIP ⇕	Birthday ⇕	Points ⇕	Average ⇕	Amount ⇕
Gloria	Reeves	67439	10/18/1985	4	0.1	$50
Graham	Bonner	90727	12/07/1983	4	0.9	$90
Warren	Wheeler	99134	11/11/1984	2	0.7	$50
Zena	Hale	19803	06/17/1987	9	0.3	$90
Julia	Haupt	24116	03/15/1991	10	1.0	$40
Rachel	English	58951	02/25/1982	7	0.3	$20
Lionel	Barry	65036	02/17/1980	7	0.5	$50
Zena	Spears	16874	12/13/1981	5	0.6	$20
Dillon	Bradford	91543	01/20/1985	7	0.4	$100
Haley	Mcleod	99321	04/12/1980	4	0.1	$20

IncludeMe demo

- Simple db code accessing IBM i service for users
(list is here: https://www.ibm.com/developerworks/community/
wikis/home?lang=en#!/wiki/IBM%20i%20Technology%20Updates/
page/DB2%20for%20i%20-%20Services/comment/
eced898c-62ae-4546-8bdd-abb9828c9653)

```php
$conn = db2_connect('*LOCAL', '', '');

$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>";
```
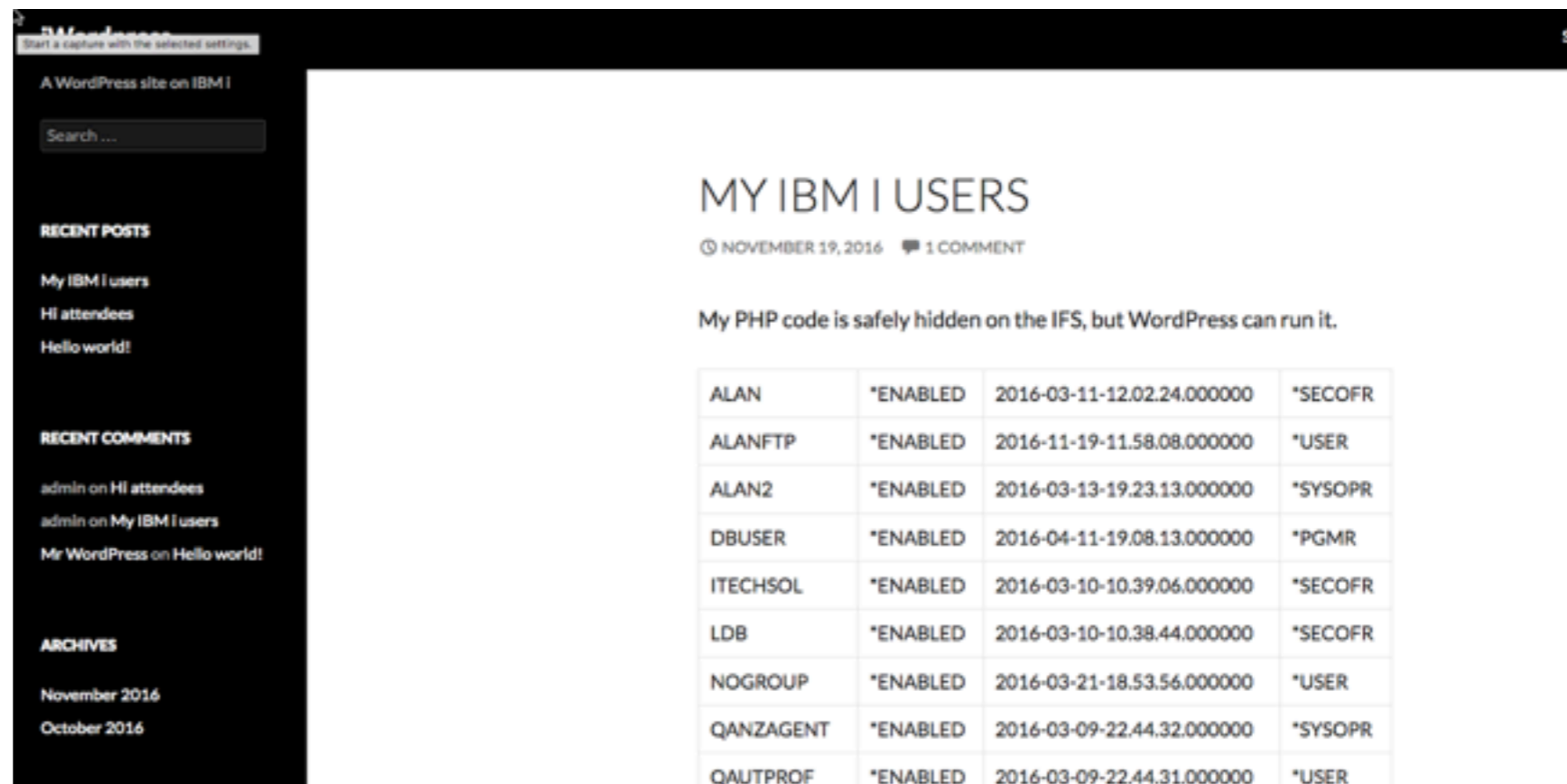
Start a capture with the selected settings.

A WordPress site on IBM i

Search ....

RECENT POSTS

My IBM i users

Hi attendees

Hello world!

RECENT COMMENTS

admin on Hi attendees

admin on My IBM i users

Mr WordPress on Hello world!

ARCHIVES

November 2016

October 2016

MY IBM I USERS

🕓 NOVEMBER 19, 2016   💬 1 COMMENT

My PHP code is safely hidden on the IFS, but WordPress can run it.
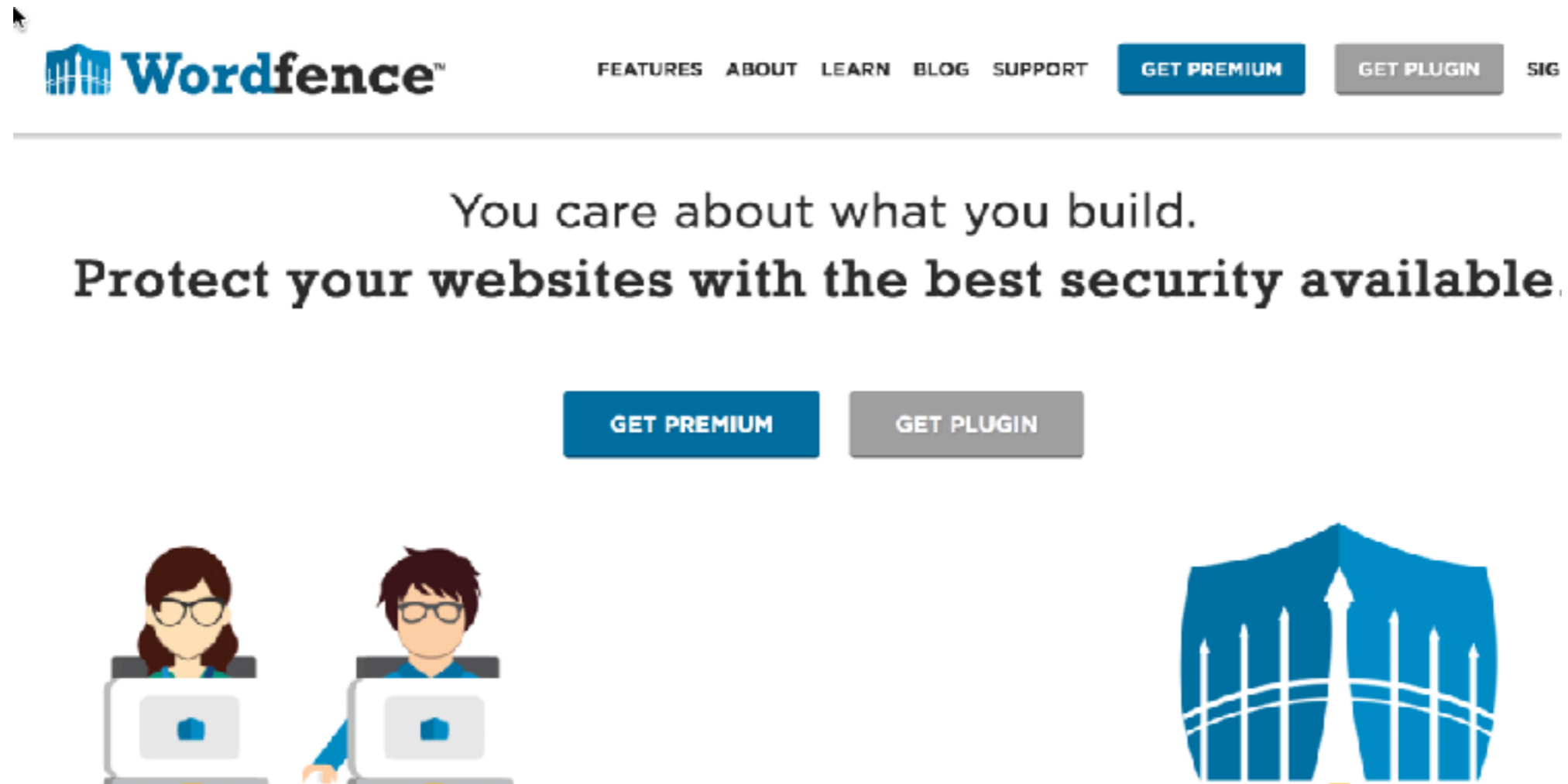
ALAN	*ENABLED	2016-03-11-12.02.24.000000	*SECOFR
ALANFTP	*ENABLED	2016-11-19-11.58.08.000000	*USER
ALAN2	*ENABLED	2016-03-13-19.23.13.000000	*SYSOPR
DBUSER	*ENABLED	2016-04-11-19.08.13.000000	*PGMR
ITECHSOL	*ENABLED	2016-03-10-10.39.06.000000	*SECOFR
LDB	*ENABLED	2016-03-10-10.38.44.000000	*SECOFR
NOGROUP	*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

Security

Try WordFence and Askimet

- Plugins noted earlier

Update regularly

- A client wrote to me: "I have had a customer get hacked on the IBM i. We were running an outdated version of Joomla that I think was the culprit. It allowed them to load junk on the IFS."

- Please update WordPress and plugins regularly.

Who can do what (roles and access)

Roles

Default roles (https://codex.wordpress.org/Roles_and_Capabilities)

- Administrator

  - Full site control, configs, themes, etc

- Editor

  - Control over content

- Author

  - Manages/publishes her own posts

- Contributor

  - Can write but not publish

- Subscriber

 - Useful if you want to limit blog access to registered users

Custom roles

Try the user role editor plugin (https://wordpress.org/plugins/user-role-editor/)

- Shortcode to show enclosed content to the users with selected roles only.

- Posts and pages view restrictions for selected roles.

GRAR case study

- Public site based on WordPress on IBM i that calls RPG stored procedures

- http://www.grar.com/ with help from Arbor Solutions
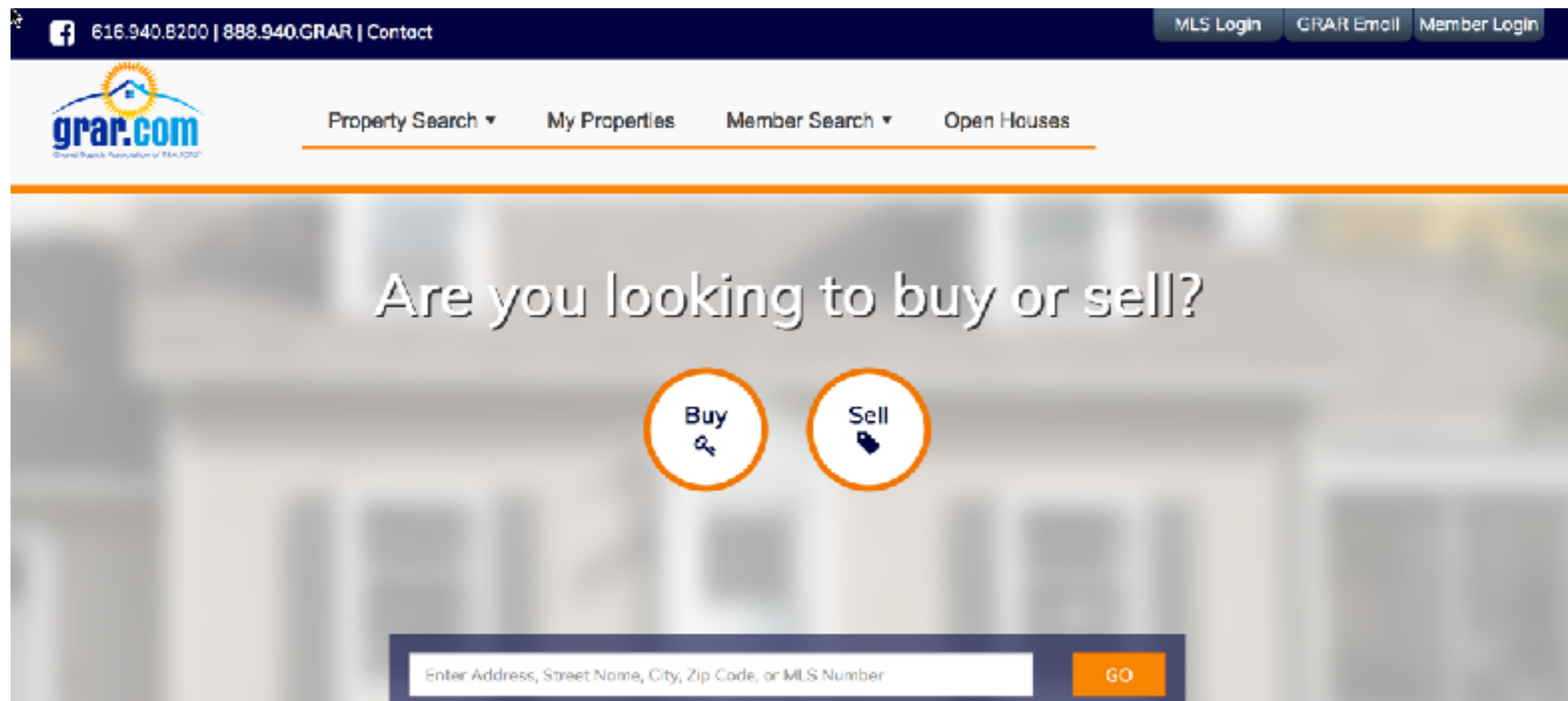
GRAR used WP as portal
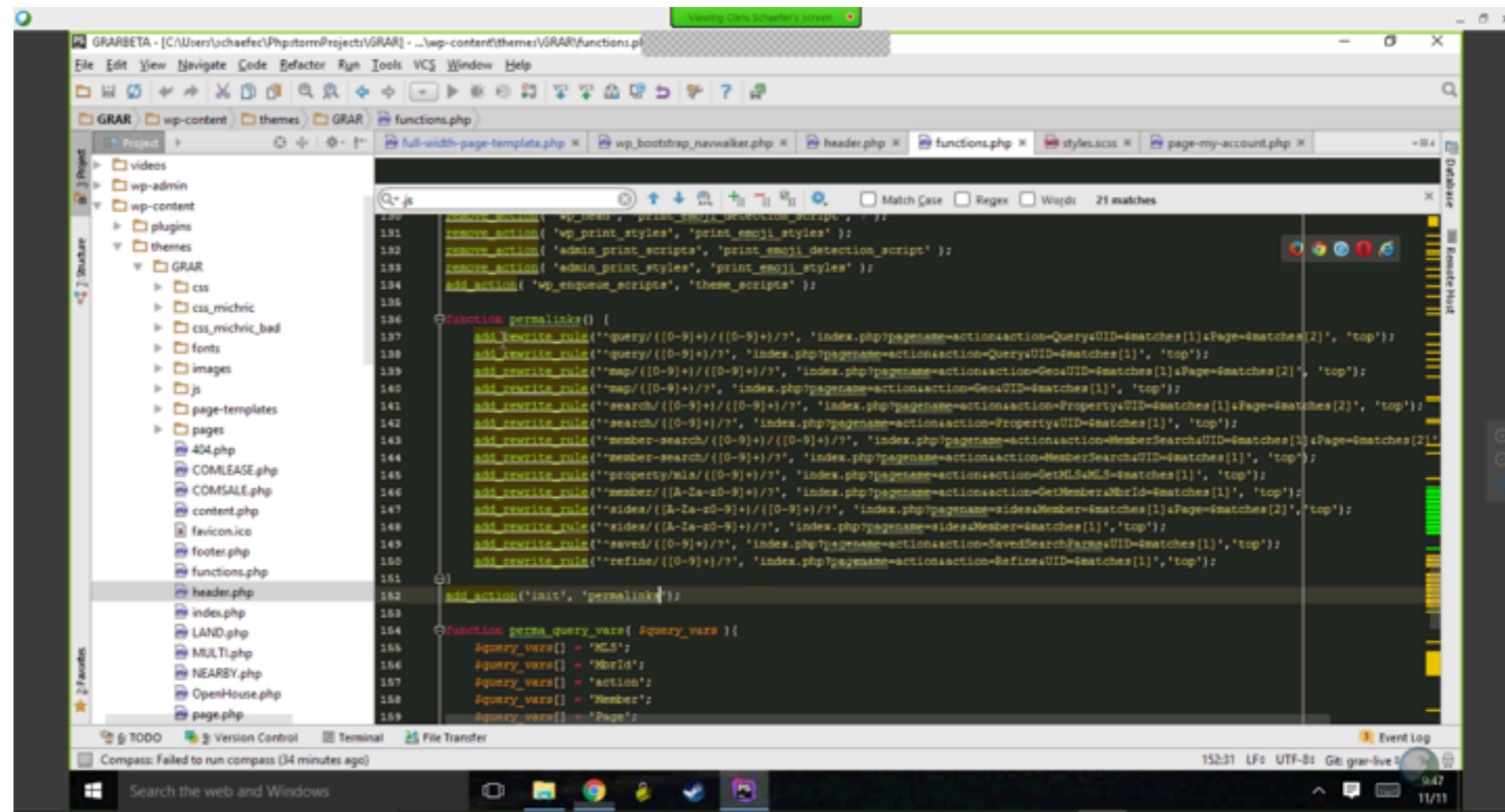
- WP provides marketing site, themes, good look

- Special pages used naming convention to include custom PHP code (they didn't have includeme plugin)
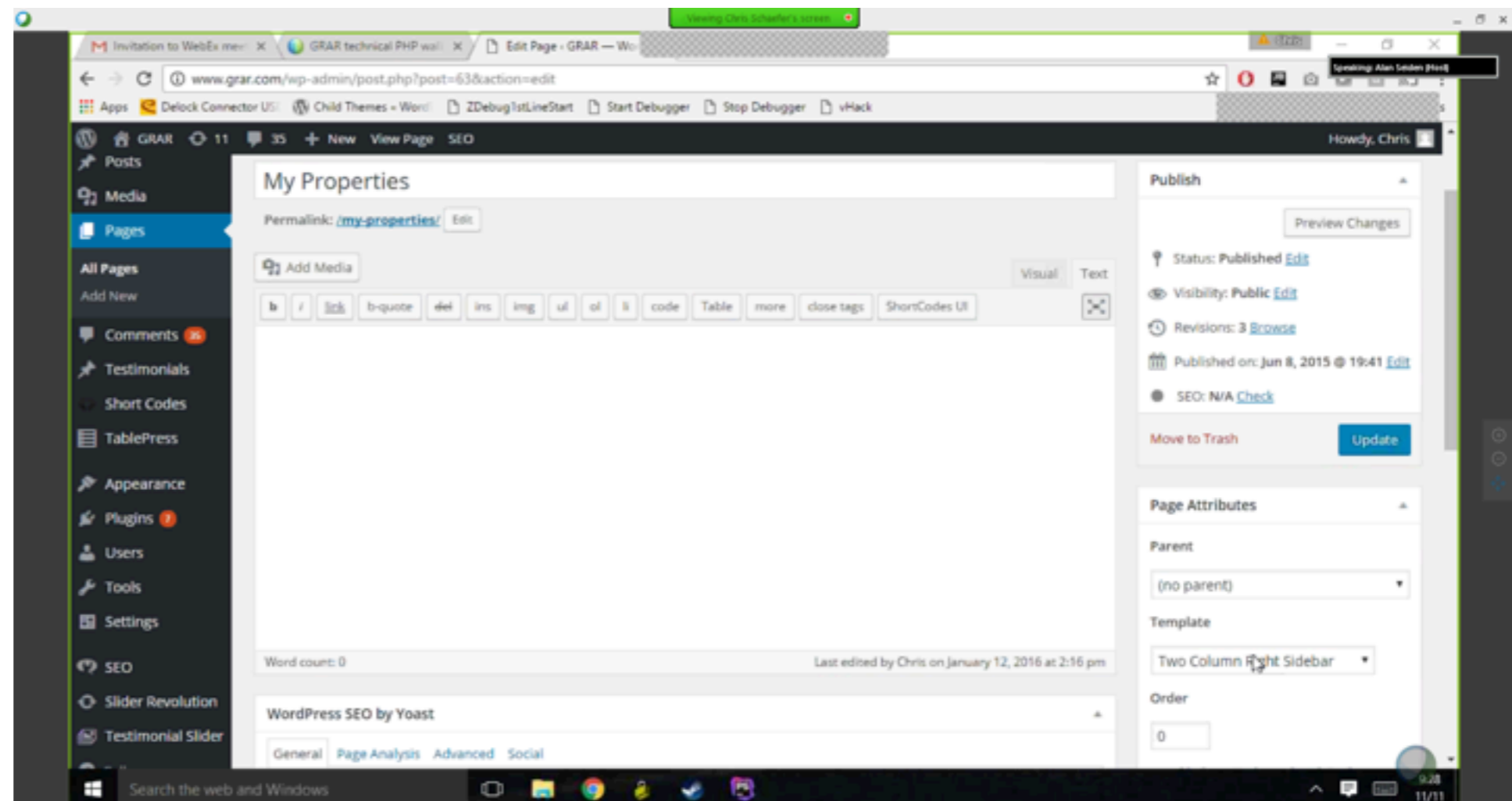
Custom PHP code used

- Security/access to pages

- Calling RPG stored procedures for heavy logic

- Live demo

Contact and tips

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http://seidengroup.com/tips

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