

# Backward Compatibility as a Design Principle

Boone Gorges

WordCamp Chicago 2016

April 30, 2016


# Boone





- WordPress core committer
- BuddyPress lead developer
- Developer and consultant, Hard G
- 1337 since 1990


Backward  
compatibility


When you upgrade,  
stuff will still work


 wpdev


 Customize


 5

 1

 New

 Edit Post

0 Howdy, admin 



wpdev

April 25, 2016

**Hey, check me out!**

Filed under: [Uncategorized](#) — admin @ 3:40 pm [Edit This](#)

WordPress Classic. Ain't nothing like the real thing.

[Comments \(1\)](#)

1 Comment [»](#)

1. WordPress 2.0 was a good piece of software.

Comment by [admin](#) — April 25, 2016 @ 3:40 pm [Edit This](#)

[RSS feed for comments on this post.](#) [TrackBack URI](#)

Leave a comment

Logged in as [admin](#). [Logout »](#)

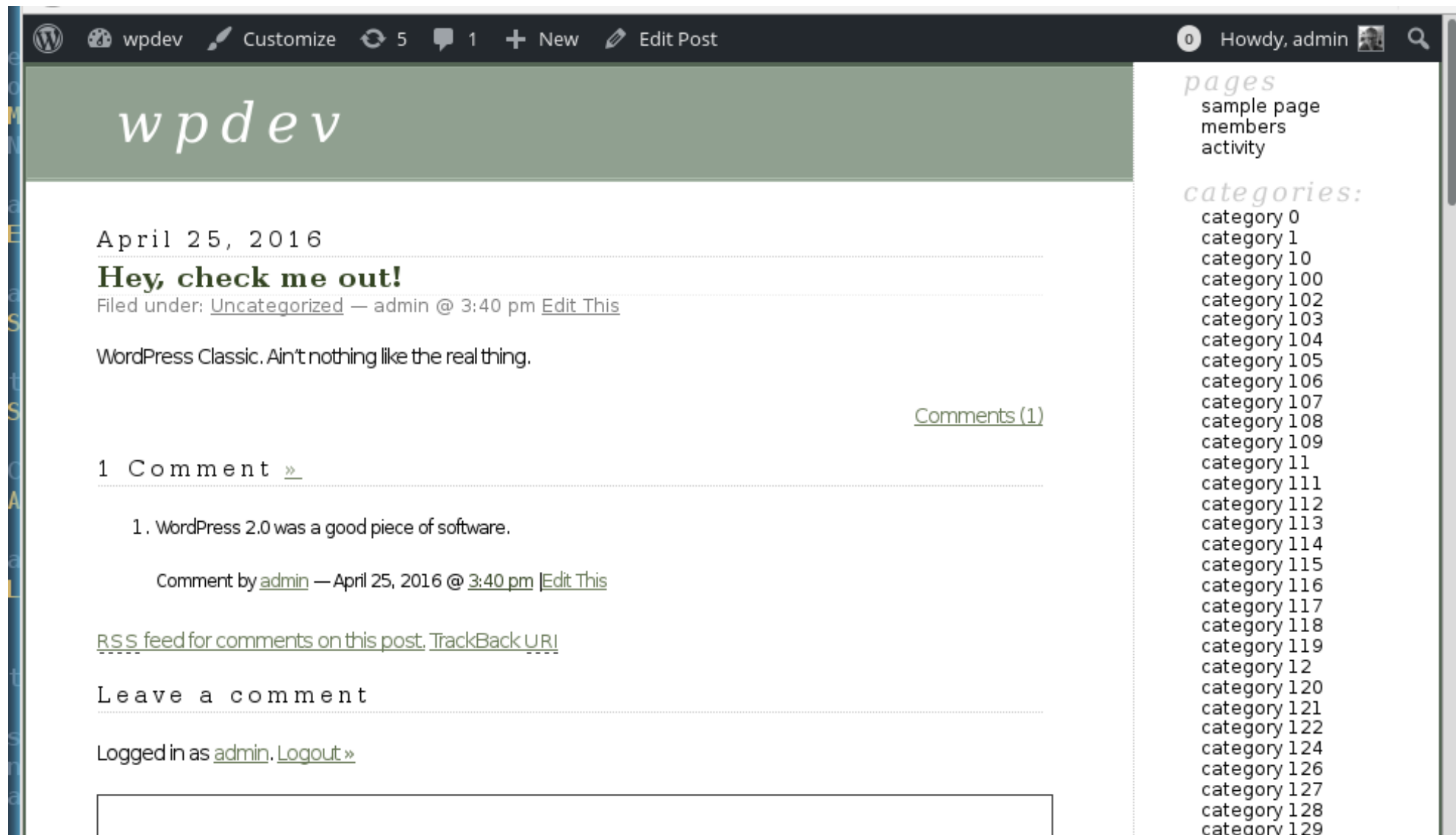
pages

[sample page](#)  
[members](#)  
[activity](#)

categories:

[category 0](#)  
[category 1](#)  
[category 10](#)  
[category 100](#)  
[category 102](#)  
[category 103](#)  
[category 104](#)  
[category 105](#)  
[category 106](#)  
[category 107](#)  
[category 108](#)  
[category 109](#)  
[category 11](#)  
[category 111](#)  
[category 112](#)  
[category 113](#)  
[category 114](#)  
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[category 116](#)  
[category 117](#)  
[category 118](#)  
[category 119](#)  
[category 12](#)  
[category 120](#)  
[category 121](#)  
[category 122](#)  
[category 124](#)  
[category 126](#)  
[category 127](#)  
[category 128](#)  
[category 129](#)

# Classic



As shipped with WP 2.0. Running on WP 4.6 trunk.

Backward  
compatibility



Backward  
compatibility





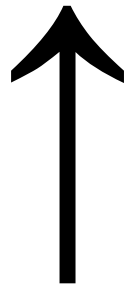
Backward  
compatibility



Backward  
compatibility  
too much



Backward  
compatibility  
too much?



Backward  
compatibility  
too much?

Backward  
compatibility

# Semantic versioning

# Semantic Versioning

*x.y.z*

# Semantic Versioning

*x* . *y* . *z*

*z*

Bug fixes and  
regressions

2.3.3 → 2.3.4



# Semantic Versioning

*x* . *y* . *z*

*z*

Bug fixes and  
regressions

2.3.3 → 2.3.4

*y*

Backward-compatible  
enhancements

2.3.3 → 2.4.0

# Semantic Versioning

*x* . *y* . *z*

*z*

Bug fixes and  
regressions

2.3.3 → 2.3.4

*y*

Backward-compatible  
enhancements

2.3.3 → 2.4.0

*x*

Compatibility  
breaks

2.3.3 → 3.0.0

# WordPress Versioning



*x.y.z*



# WordPress Versioning



$x.y.z$



$z$

Bug fixes and regressions

$2.3.3 \rightarrow 2.3.4$

$y, x$

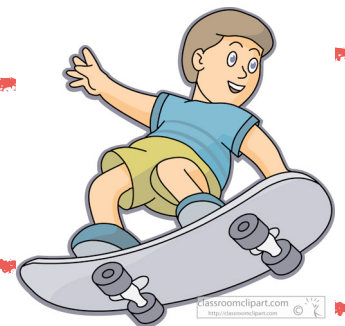
Backward-compatible enhancements

$2.3.3 \rightarrow 2.4.0$

$2.9.3 \rightarrow 3.0.0$

$x$

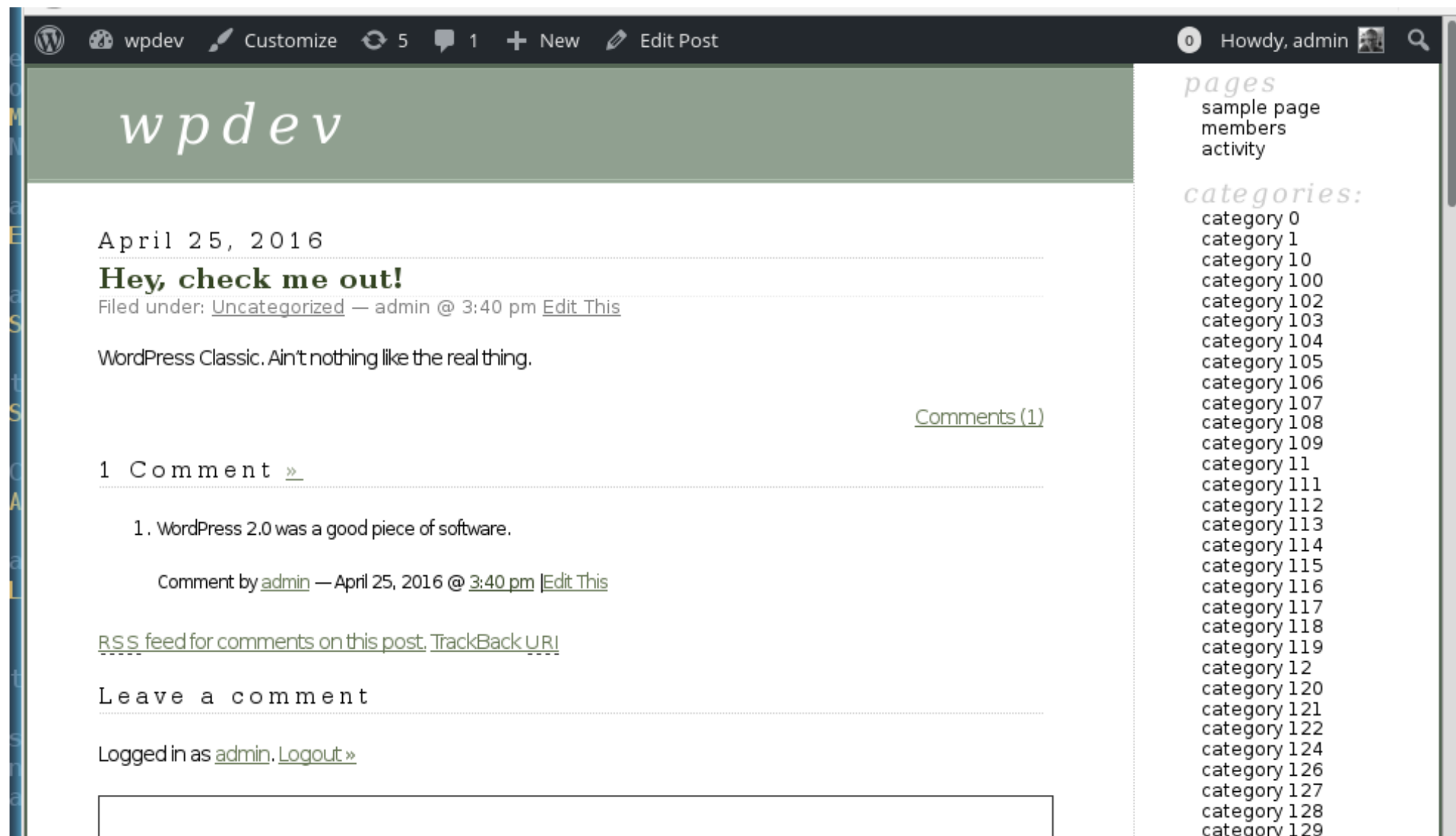
~~Compatibility breaks~~



- Templating system
- Query vars (p=123)
- Actions and filters
- etc



# Classic



As shipped with WP 2.0. Running on WP 4.6 trunk.

Backward  
compatibility  
is not all-or-nothing



“The only software that  
is 100% backward  
compatible is software  
that never changes.”

- Boone Gorges, WordPress Expert and #1 Heartthrob in Chicagoland

Edit Post

[Add New](#)

## Backward Compatibility: A Spine-Tingling Journey to the Heart of WordPress

Permalink: <http://boone.cool/wpdev/src/blog/2016/04/27/backward-compa...t-of-wordpress/>

Edit

View Post

Get Shortlink

# WordPress 4.3

Edit Post

[Add New](#)

Backward Compatibility: A Spine-Tingling Journey to the Heart of WordPress

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Permalink: <http://boone.cool/wpdev/src/blog/2016/04/27/backward-compati...art-of-wordpress/>

Edit

## WordPress 4.4

2

3 add\_filter( 'pre\_get\_shortlink', function() {

4 return 'Foo';

5 } );

Edit Post

[Add New](#)

Backward Compatibility: A Spine-Tingling Journey to the Heart of WordPress

Permalink: <http://boone.cool/wpdev/src/blog/2016/04/27/backward-compa...t-of-wordpress/>

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View Post

Get Shortlink

## WordPress 4.3

Edit Post

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Backward Compatibility: A Spine-Tingling Journey to the Heart of WordPress

Permalink: <http://boone.cool/wpdev/src/blog/2016/04/27/backward-compati...art-of-wordpress/>

Edit

## WordPress 4.4

```
572
573 // As of 4.4, the Get Shortlink button is hidden by default.
574 if ( has_filter( 'pre_get_shortlink' ) || has_filter( 'get_shortlink' ) ) {
575     $shortlink = wp_get_shortlink($post->ID, 'post');
576
577     if ( !empty( $shortlink ) && $shortlink !== $permalink && $permalink
e_id=' . $post->ID) ) {
578         $sample_permalink_html .= '<input id="shortlink" type="hidden" value
rtlink) . ' " /><a href="#" class="button button-small" onclick="prompt(&#39;
'#shortlink\').val()); return false;">' . __('Get Shortlink') . '</a>';
579     }
580 }
```

Edit Post [Add New](#)

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Permalink: <http://boone.cool/wpdev/src/blog/2016/04/27/backward-compati...art-of-wordpress/>

Edit

Get Shortlink


Edit Post [Add New](#)

# Backward Compatibility: A Spine-Tingling Journey to the Heart of WordPress

Permalink: <http://boone.cool/wpdev/src/blog/2016/04/27/backward-compati...art-of-wordpress/>


Edit

Get Shortlink

 Add Media

Visual

Text

**B** *I* ABC            

Spine-tingling content goes here.

URL:

Foo

Cancel

OK

User interface



Developer-facing APIs



## Database Update Required

---

WordPress has been updated! Before we send you on your way, we have to update your database to the newest version.

The database update process may take a little while, so please be patient.

[Update WordPress Database](#)

Preservation of data



# WordPress trac

## Ticket #5809 (new defect)

### Categories affect tags of the same name

Opened 5 months ago  
Last modified 2 months ago

Reported by: rmccue

Assigned to:

anonymous

Priority: normal

Milestone:

2.6

Component: General

Version:

2.5

Severity: normal

Keywords:

Cc: klawd@kamundo.de

### Description (Last modified by lloydbudd)

As reported by klawd on #wordpress and reproduced by me, editing a category will affect a tag with the same name.

#### Steps to reproduce:

1. Create a category called Testing
2. Create a tag called Testing
3. Rename the Testing category to Another Test
4. Check the name of the tag



**Boone Gorges** 12:57 pm on February 16, 2015

Tags: [4.2 \( 67 \)](#), [taxonomy \( 11 \)](#)

## Taxonomy term splitting in 4.2: a developer guide

In WordPress 4.2, shared taxonomy terms – those items in the `wp_terms` table that are shared between multiple taxonomies – will be split into separate terms when one of the shared terms is updated. This change ([\[31418\]](#)) fixes [one of WordPress's most irksome bugs](#), and is a critical step in our ongoing [taxonomy roadmap](#).

### Technical details and backward compatibility

Each row in the `wp_term_taxonomy` table represents the dyad of a term slug and a taxonomy – say, the tag slug ‘mint’ and the taxonomy ‘herb’. Historically, terms in different taxonomies that shared the same slug would share a single row in the `wp_terms` table; thus, the ‘mint’ row in `wp_terms` could correspond to a term-taxonomy pair in the ‘government\_building’ taxonomy as well as ‘herb’. Starting with 4.2, when you update a shared taxonomy term – `wp_update_term( $mint_id, 'government_building' )` – WordPress will detect whether the term is shared between multiple taxonomies, and if so, will create a new row in `wp_terms` for the updated term and change all necessary `term_taxonomy` associations. `term_taxonomy_id` will stay the same, but `term_id` will change. This is a case of a *shared* term being *split* into separate terms.

# Working with “split terms” in WP 4.2+

Prior to WP 4.2, terms in different taxonomies with the same slug (for instance, a tag and a category sharing the slug “news”) shared a single term ID. Beginning in WordPress 4.2, when one of these shared terms is updated, it will be split: the updated term will be assigned a new term ID.

In the vast majority of situations, this update will be seamless and uneventful. However, some plugins and themes store term IDs in options, post meta, user meta, or elsewhere. WP 4.2 will include two different tools to help authors of these plugins and themes with the transition.

The `'split_shared_term'` action #

## TOPICS

The  
`'split_shared_term'`  
action

- Updating a term ID stored in an option
- Updating a term ID stored in post meta

The  
``wp_get_split_term()``  
function

Backward  
compatibility  
is not free

PHP 5.2



# Accidental APIs and global state



[Log in](#) / [Register](#)

[Home](#) » [About](#) » [About Archive](#)

## Backward compatibility for data, not code

Everyone considering Drupal should understand that Drupal development is always on the cutting edge, and with each major release there will be radical improvements. (*For more information on what Drupal version numbers mean, please see: <http://drupal.org/handbook/version-info>.)* While the upgrade path will reliably preserve your *data*, there is no backward compatibility with the previous Drupal *code*.

<https://www.drupal.org/node/2613652>

“1. Each new major release of Drupal contains many, often radical, improvements in functionality, scalability and usability.

2. These advancements are made possible by not maintaining backwards compatibility with previously released code...”

<https://www.drupal.org/node/2613652>



Backward  
compatibility  
is important

# WordPress Updates

**Important:** before updating, please [back up your database and files](#). For help with updates, visit [WordPress.org](#).

Last checked on April 25, 2016 at 4:41 pm.

Check Again

**An updated version of WordPress is available.**

You can update to [WordPress 4.5](#) automatically or download the package and install it manually:

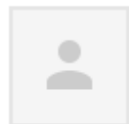
Update Now

Download 4.5

While your site is being updated, it will be in maintenance mode. As soon as your updates are complete, your site will be back online.



## [boonebgorges.com] Your site has updated to WordPress 4.1.5



**WordPress** <wordpress@boonebgorges.com>

to me 

Howdy! Your site at <http://boonebgorges.com> has been updated automatically to WordPress

For more on version 4.1.5, see the About WordPress screen:

<http://boonebgorges.com/wp-admin/about.php>

WordPress 4.2.2 is also now available. Updating is easy and only takes a few moments:

<http://boonebgorges.com/wp-admin/network/update-core.php>

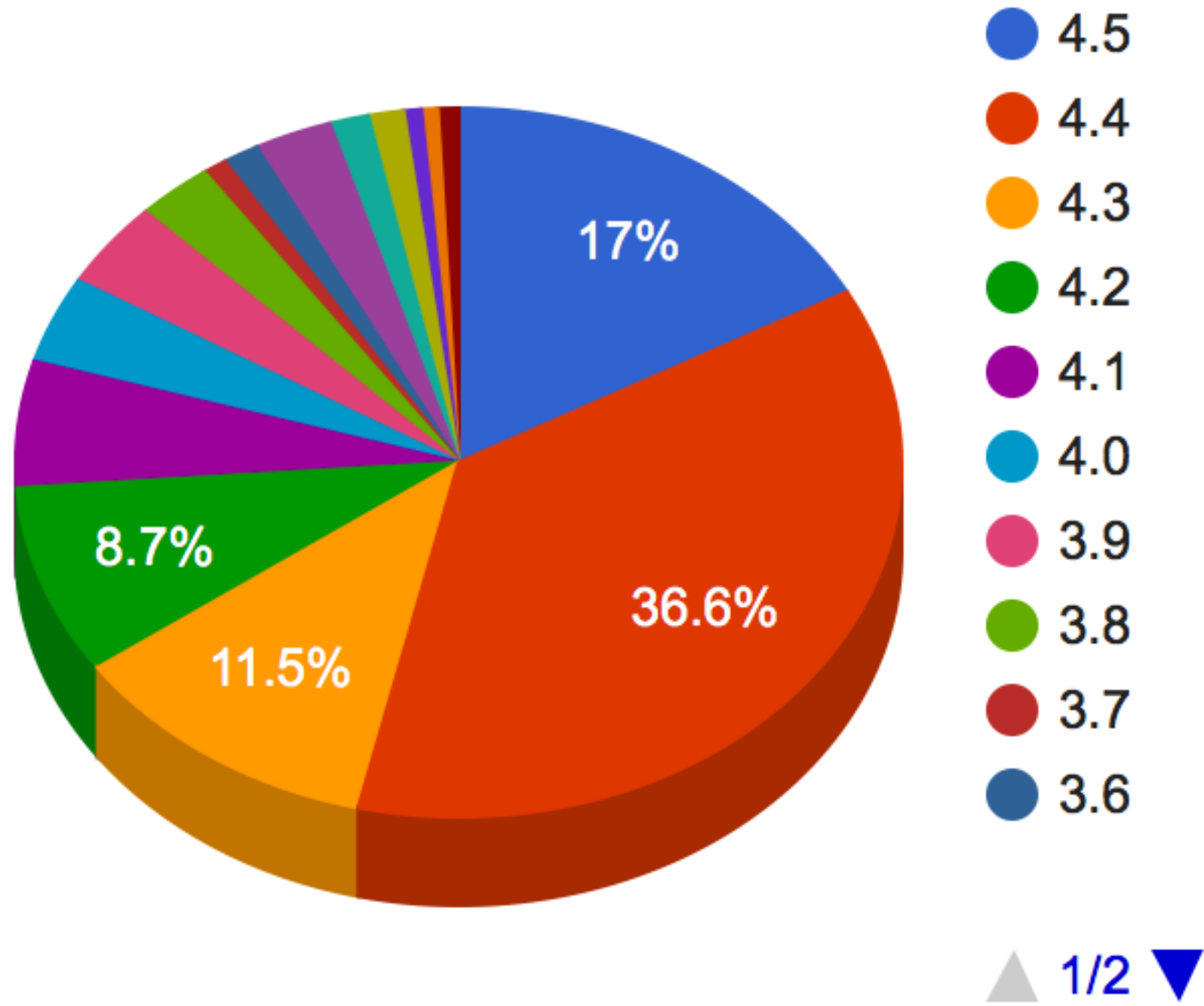
If you experience any issues or need support, the volunteers in the WordPress.org support forums are available:

<https://wordpress.org/support/>

Keeping your site updated is important for security. It also makes the internet a safer place for everyone.

The WordPress Team

## WordPress Versions





A culture of upgrading  
depends on  
a culture of confidence

# Drupal™

Log in / Register

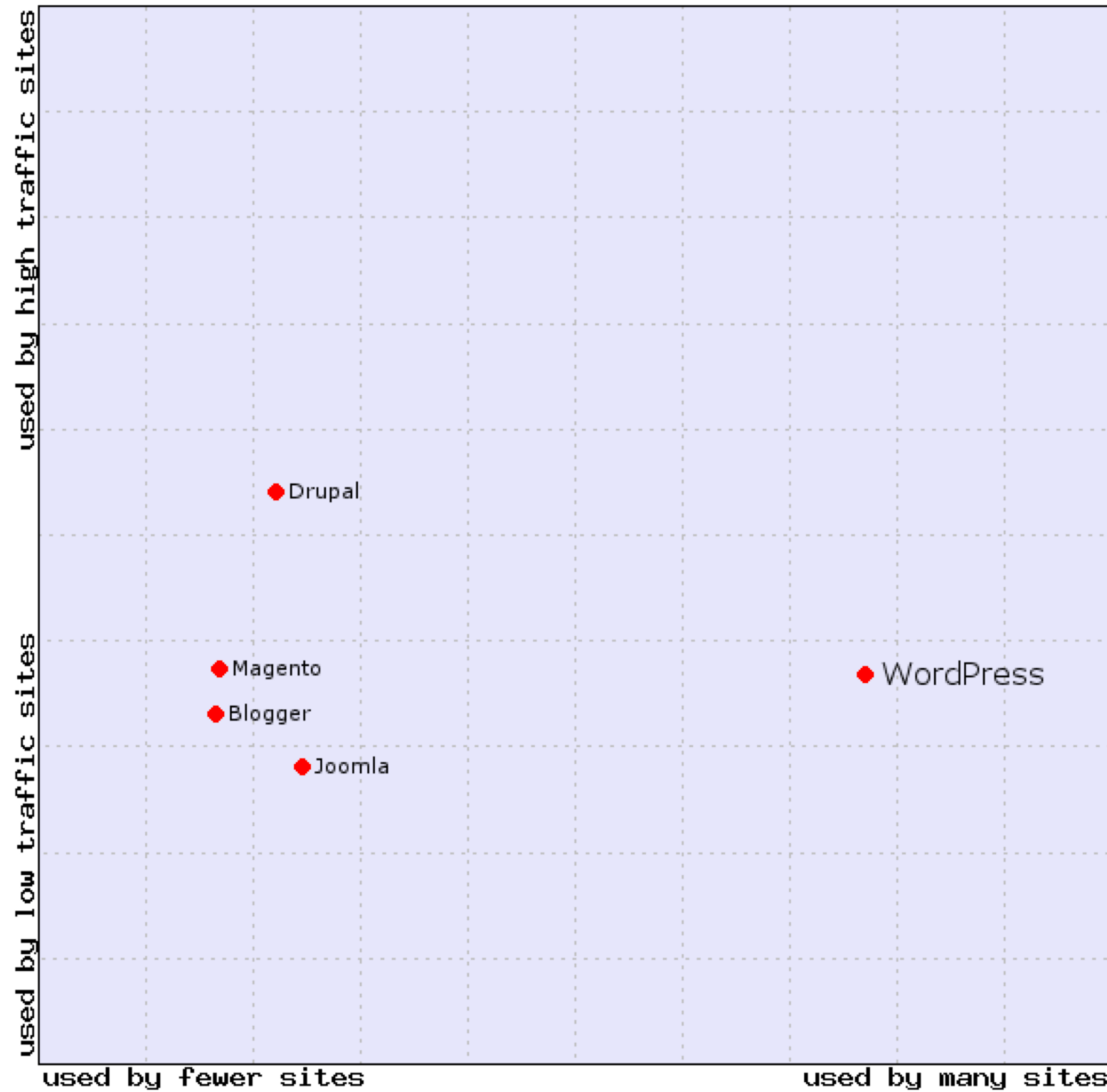
[Home](#) » [About](#) » [About Archive](#)

## Backward compatibility for data, not code

“Therefore, people adopting Drupal for their web or CMS project should plan for periodic upgrades of their project to the latest major release (every 6 years or so) in order to benefit from the ongoing active support of one of the finest open source development communities.”

<https://www.drupal.org/node/2613652>

WordPress Market Position, 29 Apr 2016, W3Techs.com



<http://w3techs.com/technologies/details/cm-wordpress/all/all>

Backward  
compatibility

Thanks