Managing a gigantic multisite installation & surviving to tell the tale.

WPCampus 2017 • Mike Richwalsky • Gas Mark 8, Ltd.

HI, MY NAME IS MIKE

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Watch for major keys

BABY IF YOU COULD WOULD YOU GO BACK TO THE START?
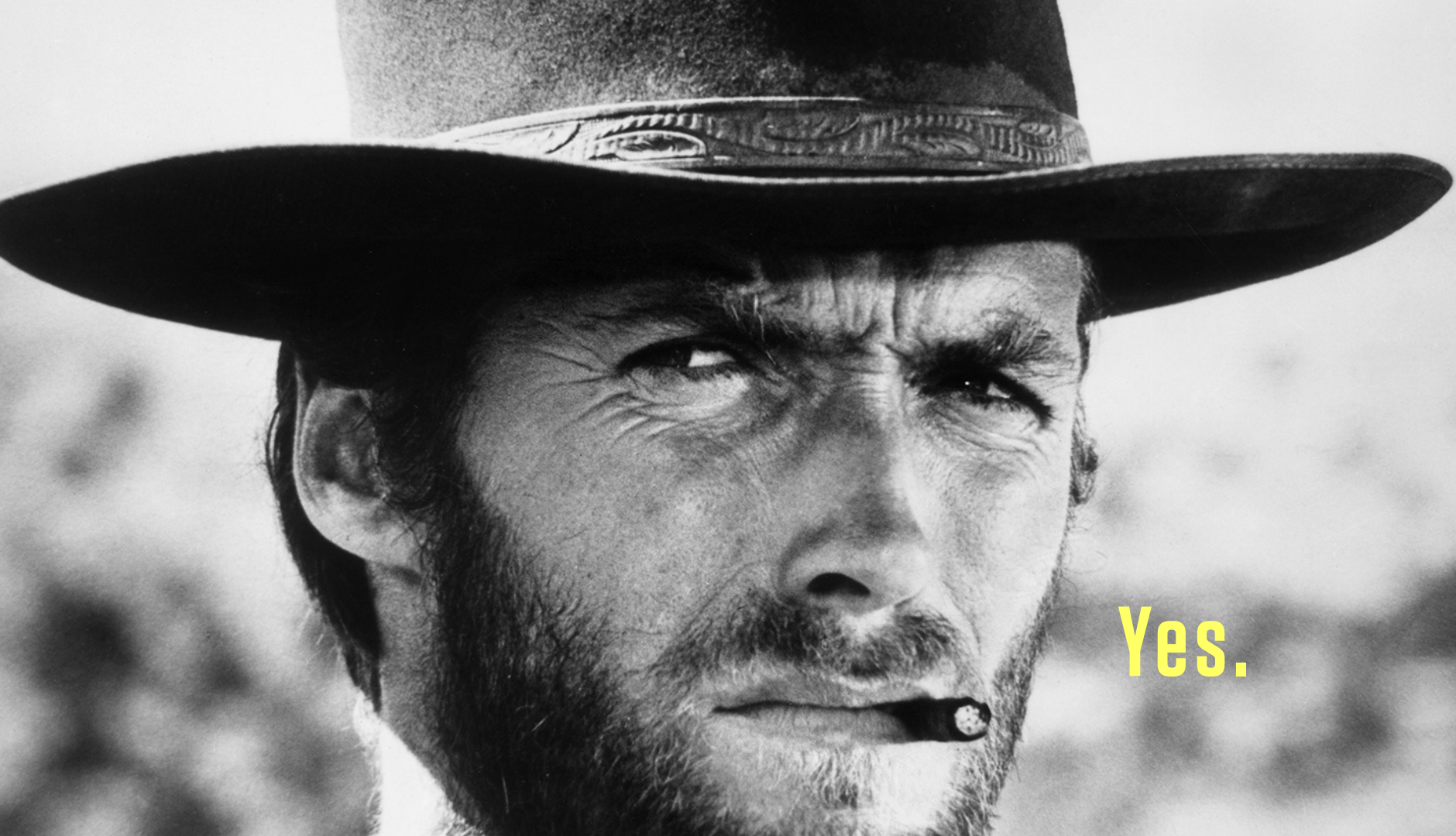
#monthebiff

John Carroll University Circa 2010

- No central CMS
- No centralized control
- Dreamweaver templates

Was it that bad?

Yes.

Baby Steps

- Full CMS search
- Full redesign

Moved Hosting

- We hosted on campus on an IIS server that went down all the time
- I didn't have access to monitoring tools that IT used

Guess who always noticed the site was down first.

Yo.

The website is down again

I'll have a look

😠

Moved to Rackspace

- 4GB RAM. Beefy machine!
- Apache, PHP, MySQL
- SSL added later, manually
  – Generated by IT

I thought I could fix everything on my own

- I was an army of one
- I knew WordPress
- I'm pretty smart

You can't solve every challenge or issue on your own. It's ok to look outside for help.

All user uploads are stored and served from Amazon S3

All of WP's transactional emails are sent through SendGrid

We staffed up

- Remote development help at first (Cheers, Adam!)
- We brought on content manager

#deepbreath

One Big Multisite

- And a few stragglers
  - Daily campus news site
  - Online giving
  - Alumni Mentoring Buddypress
  - A few other randos

Why one multisite?

One theme to rule them all,
One set of plugins to find them,
One set of trainings to bring them all in,
And in the darkness, bind them.

15 months later

- We moved 150 sites into WP, did a full content review of each one, and trained users

#slightlessshallowbreathing

Then people started asking for stuff.

Special Stuff

- Faculty office hours
- LaTeX
- Different list item bullet styles
- A directory of alumni owned businesses
- And much more...

How do you deal with requests for new features or feature changes without resorting to dozens of plugins?

This slide serves as a break to say that plugins aren't bad, but they add another layer of support, require additional training, and can be a new attack vector.

THE GREATER GOOD

LIMITING USER ROLES

All users are all editors

- They can't add, edit, or change themes

- They can't add or activate plugins

- We take buttons away in TinyMCE

- We hide all plugin nag screens (lookin' at you, Yoast)

We reviewed feedback and planned work

- Based on feedback, we created several custom post types
- Data and formatting can be consistent from site to site
- Only have to train on 1 tool

Define Faculty Details Here ▲

Image Upload

Upload new images

[Choose File] No file chosen

Add more images

Job Title

e.g. Assistant Professor

Jesuit

☐

Department Chair

No ⇕

Is the faculty member a Department Chair

Degrees

e.g. M.A., Hood College; Ph.D., West Virginia University

Area of Expertise

Email

@jcu.edu

Enter the email address here

Faculty Custom Post Type

- As we rolled it for all academic departments, they sent more feedback, like we want areas of research, so we built it in.

- We can pull that data into different sites if we ever wanted do.

Forms for surveys and registrations

- We give them access to Gravity Forms

- How to: https://hewt.in/9w

SANDWICHES ←

HAMBURGER	2 09
DELUXE BURGER	2 85
CHEESE BURGER →	2 39
CHEESE DELUXE →	3 19
TERI CHEESE BURGER	2 59
TERI HAMBURGER	2 29
ROAST BEEF ON BUN	3 15
TERI BEEF ON BUN	3 05
FRENCH FRIES	1 55 2 69
MANAPUA	1 15

SHAKES — 3 79
CHOCOLATE
VANILLA
ICE CREAM   1 99   2 25

PEPSI COLA
SIERRA MIST
MUG ROOT BEER
DIET PEPSI
FRUIT PUNCH

S 85¢   M 1 15   L 1 39
XL 1 69   JUMBO 2 15

PEPSI FLOAT	3 09
7UP. ROOT BEER FLOAT	3 09
HOT COFFE	65 ¢

THE JCU OPTIONS PANEL

The JCU Options panel

- This let us set theme variables on a site by site basis without needed tons of theme changes

- Number of news stories, image sliders, even the type list item bullet styles. Yes, bullet styles.

- Editors don't see this panel

Mike, show the JCU options panel now.

Did we still do special one-offs in the theme?

HELL
YES

#guidedmeditation

PERFORMANCE ISSUES

When you are running 250+ sites on a machine with 4GB of RAM

"You're gonna have a bad time."

Some plugins caused massive overhead

- Lookin' at you, Timely.

The server would get hammered, MySQL would run out of RAM, WP would start getting connection errors, and everything just failed, until a restart, at least of Apache and MySQL.

Sometimes, it would fail during its nightly backups and hang. I enjoyed getting Vigil notifications at 1:30 a.m. all the time.

`sudo reboot now`

Brah the site's down again. wtf are you doing?

Throw as much hardware at your site as you can afford

New Server Setup

- ServerPilot to the rescue
- Nginx, Apache reverse proxy
- MariaDB
- SSL by Let's Encrypt
- HTTP/2

ServerPilot

NAME	DOMAINS	SYSTEM USER	PHP VERSION	SSL
givetojcu DEFAULT	giveto.jcu.edu www.giveto.jcu.edu	givetojcu	PHP 7.0	AutoSSL
gojcuedu	go.jcu.edu	serverpilot	PHP 7.0	No SSL
insidejcu	inside.jcu.edu www.inside.jcu.edu	serverpilot	PHP 7.1	AutoSSL
jcucarrollfund	carrollfund.jcu.edu www.carrollfund.jcu.edu	serverpilot	PHP 7.0	AutoSSL
jcuedu	www.jcu.edu jcu.edu	serverpilot	PHP 7.0	No SSL
jcupresidentsearch	presidentialsearch.jcu.edu www.presidentialsearch.jcu.edu	serverpilot	PHP 7.1	AutoSSL

#inserthashtaghere

Be humble.

Be humble.

- We know more way about the web and technology than most people on our campus.
- That's hard because we get frustrated.
- Especially when dealing with leadership.

Shout out to everyone at JCU who helped me during my tenure... <3

- Meredith Tayek
- Kevin Hatgas
- Adam Palin
- Rachelle Psznick
- John Carfagno
- Josh Tysiachney
- Hiba Anwer

- Joel Mullner
- Rachel Purton
- John Young
- Dan Binns
- Troy Field
- Pat Caruso
- Many others...

Thank you to all of you!

- WPCampus
- HighEdWeb
- Slack
- Twitter
- Instagram

TL/DR;

- Find tools and services to help you
- Think about the greater good
- Throw the best hardware you can at your site
- Be humble
- Take care of you

Thanks!

@mrichwalsky

Highedwebtech.com

Download:

https://hewt.in/wpcampus