Be Your Own Sysadmin

Hosting WordPress for $5/month
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- Father of 2
- Husband of 1
- Based in Lexington, NC (pop. 18,931)
Previous Talks

● Customer Service and the Freelancer
  ○ WordCamp Asheville 2015
  ○ Slides: http://mygeeknc.d.pr/TOP5

● WordPress Business: The Basics
  ○ WordCamp Asheville 2014
  ○ Slides: http://mygeeknc.d.pr/1crrO
  ○ Video: http://mygeeknc.d.pr/1cZV3

● Beyond SEO
  ○ WordCamp Raleigh 2013
  ○ Slides: http://mygeeknc.d.pr/1cdi0
Follow Along

- Slides:
We should have time for questions. Please hold on to them.
DigitalOcean

- DigitalOcean (DO) is a VPS (virtual private server) provider based in NYC.
- As of June 2015, DO is the second largest hosting provider in the world.
- Data centers in:
  - New York
  - Amsterdam
  - San Francisco
  - Singapore
  - London
  - Frankfurt
- Launched in 2011
Create our server

- **Hostname:** domain.com
- **Size:** $5/month
  - 512MB
  - 1CPU
  - 20GB SSD
  - 1000GB Transfer
- **Region**
  - New York 3
- **Image**
  - Ubuntu 16.04.1 x64 (LTS)
  - Or WordPress on 16.04.1 Application (Requires $10/month plan)
Create our server continued

- **Additional Settings**
  - Backups (Adds 20% to monthly cost so, roughly $6/month).
- **SSH Keys**
  - Excellent Security Measure (Highly Recommended)
    - [https://www.digitalocean.com/community/tutorials/how-to-set-up-ssh-keys--2](https://www.digitalocean.com/community/tutorials/how-to-set-up-ssh-keys--2)
- **Now, click create. 60 (or so) seconds later, we’ll have our server.**
Configurin’ Your Server

● **Gain remote access**
  ○ Email will be sent with
    ■ IP Address
    ■ Username
    ■ Password
  ○ `ssh username@IP Address`
    ■ `ssh root@100.100.100.101`

● **Reset Password**
  ○ It will ask for your current (temporary) password first.
  ○ Then enter your new password twice.
Configurin’ Your Server Continued

- Secure
  - Firewall
  - SSH Keys and disable remote root login
  - Fail2Ban

- Firewall
  - ufw (Uncomplicated Firewall)
    - `ufw default deny`
    - `ufw allow ssh`
    - `ufw allow http`
    - `ufw enable`

- SSH Keys
  - Refer back to the DO tutorial

- Fail2Ban
  - `apt-get install fail2ban`
Configurin’ Your Server Continued

● Our Apps
   ○ NGINX - Web Server
   ○ PHP5-FPM - PHP
   ○ MariaDB - MySQL Server

● Update Repos
   ○ apt-get update

● Upgrade Packages
   ○ apt-get upgrade

● Install Apps
   ○ apt-get install nginx-full php5-fpm php5-curl php5-mysql unzip vim

● Create our source directory
   ○ mkdir /var/www
Configurin’ Your Server Continued

● Configure PHP7
   ○ cd /etc/php/7.0/fpm/
   ○ wget http://mygeeknc.d.pr/PMG3+ -O php.ini
   ○ cd pool.d
   ○ wget http://mygeeknc.d.pr/1eCOw+ -O www.conf
   ○ php-fpm7.0 -t
   ○ service php7.0-fpm restart
Configurin’ Your Server Continued

- Configure NGINX
  - cd /etc/nginx/
  - wget http://mygeeknc.d.pr/17fAY+ -O nginx.conf
  - cd sites-available/
  - wget http://mygeeknc.d.pr/197kR+ -O default
  - vi default
    - %s/{{server_name}}/domain.com/g
    - esc + :wq
  - nginx -t
  - service nginx restart
Configurin’ Your Server Continued

- Install MariaDB
  - `apt-get install mariadb-server`
- Configure MariaDB (MySQL)
  - `Mysql_secure_installation`
    - Set the root password (never use the root password for anything other than administration)
    - Then answer Yes to everything but “Change the root password”
  - `service mysql restart`
Setup MySQL user and database
  ○ cd /root/
  ○ wget http://mygeeknc.d.pr/M1FZ+ -O setup_mysql.sh
  ○ chmod +x setup_mysql.sh
  ○ ./setup_mysql.sh domain.com
Installin’ WordPress

- Install WordPress
  - cd /var/www
  - wget https://wordpress.org/latest.zip
  - unzip latest.zip
  - mv wordpress/* .
  - rm -rf wordpress/ latest.zip
Installin’ WordPress

● Fix our ownership and permissions
  ○ cd
  ○ wget http://mygeeknc.d.pr/1dwc+ -O reset_permissions.sh
  ○ chmod +x reset_permissions.sh
  ○ ./reset_permissions.sh

● Change your DNS records to point to your new server
  ○ Visit your domain, enter your site details.

● We Have WordPress!
Super Charge WordPress - Advanced

- RAM Based NGINX Microcache
  - Why RAM?
    - RAM is still faster than SSD
  - Why microcache?
    - When one request comes in, the next request to come along asking for the same item will be served from the RAM without having to process the request with PHP and MySQL.
Super Charge WordPress - Advanced

- Setting it up
  - mkdir /etc/nginx/cache
  - vi /etc/fstab (be careful here)
    - tmpfs /etc/nginx/cache tmpfs rw,size=25M,mode=777 0 0
    - esc + :wq + enter
  - mount -t tmpfs -o size=25M tmpfs /etc/nginx/cache/
  - cd /etc/nginx/
  - wget http://mygeeknc.d.pr/14UoR+ -O nginx.conf
  - cd /etc/nginx/sites-available/
  - wget http://mygeeknc.d.pr/17sin+ -O default
  - vi default
    - :%s/{{server_name}}/domain.com/g
    - esc + :wq + enter
  - nginx -t
  - service nginx restart
SFTP Access

- By default, you can log in via your root username and password.
  - I highly recommend you change this to SSH keys. Look in the previous slides.
- Clients
  - ForkLift (OSX)
  - WinSCP (Windows)
  - Many others.
Questions?