An Introduction to WordPress Security

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The Goal: Staying Afloat

photo by Flickr user davidesimonetti

WordPress Security

- Raise the security bar
- Plugins and services
- Disaster recovery

Vulnerabilities

photo by Flickr user misterbisson

Drive by exploits

- Most attacks aren't targeted
- Little time per site
- Known exploits

timthumb.php exploit

- Common image library used in WP themes
- Exploited poor error checking
- Arbitrary code execution

http://markmaunder.com/2011/08/01/zero-day-vulnerability-in-many-wordpress-themes/

Password Brute-forcing

- Automated attack on a user account
- Takes time, will show up in logs
- Some evidence of scripts that are distributed across multiple nodes

http://isc.sans.edu/diary.html?storyid=7663

Raising The Bar

photo by Flickr user Mike_tn

Change Database Table Prefix

- Defaults to "wp_"
- Use anything else
- Makes SQL injection a little more difficult

Delete 'admin' user

- In WP Dashboard create a new administrative user
- Log in as the new user, delete the original user
- Some scripts are programmed to target 'admin'

Use SSL (HTTPS) in wp-admin

- Encrypts traffic to your site
- Stops attackers from reading your traffic or stealing your login cookies
- Check with your hosting provider to see if you have support
- Can be a self-signed certificate if you are the only one using wp-admin

File Permissions

- Only as loose as required, NOT more
- Recommended 755 for directories and 644 for files

http://codex.wordpress.org/Hardening_WordPress#File_Permissions

Change wp-config.php secrets

- Security keys used for setting various cookies and internal crypto properties
- Changing them will just cause any logged in user to need to re-authenticate
- Use the generator:

https://api.wordpress.org/secret-key/1.1/salt/

- Bonus: IP restrict wp-admin

  - Use .htaccess to restrict access to the dashboard
  - If your public IP address changes you will get locked out of WP and need to edit the .htaccess via FTP or shell access

http://httpd.apache.org/docs/2.2/mod/mod_authz_host.html

Unlimited Power

photo by Flickr user Frank.Li

Limit Login Attempts

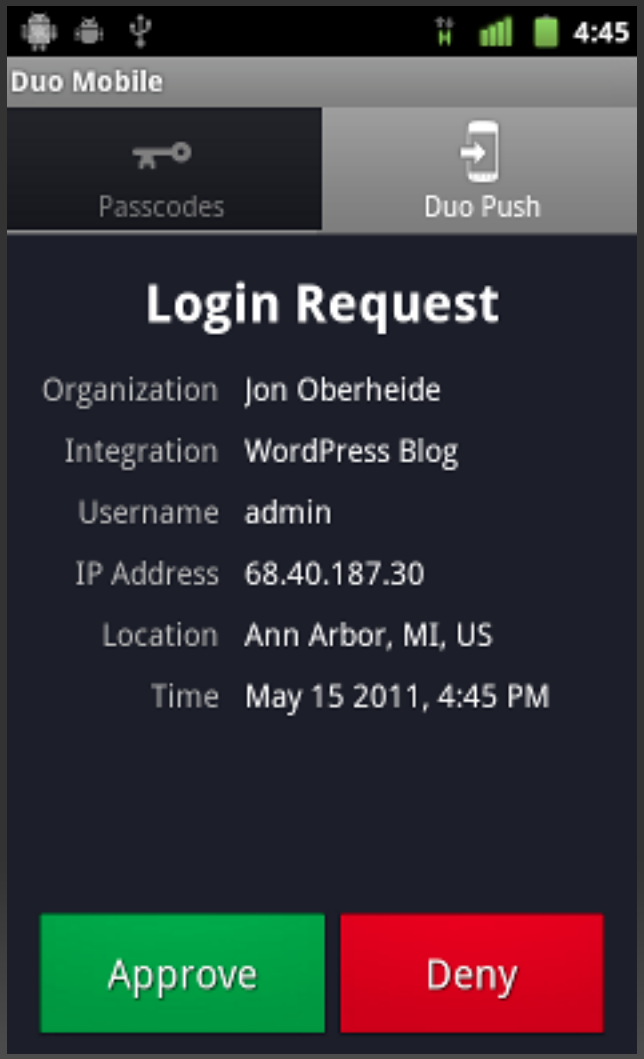
- Rate limits failed login attempts
- Can hinder brute force attacks
- Notifies in case of too many failures

http://wordpress.org/extend/plugins/limit-login-attempts/

Duo WordPress

- Two-factor authentication for your WordPress site
-
- Protects from account take over

Duo Push Notification



http://wordpress.org/extend/plugins/duo-wordpress/

Emergency Preparedness

photo by Flickr user doisespressos

Backups!

- Backup your WP database regularly (and the site files)!
- Do them, test them!
- Plugins: WP-DB-Backup or PressBackup

http://wordpress.org/extend/plugins/pressbackup/

http://wordpress.org/extend/plugins/wp-db-backup/

Disaster Recovery

photo by Flickr user born1945

Restore your site

- Don't just try to clean the site
- You could miss hidden backdoors
- Backup the infected site for later analysis
- Restore from a known good backup

Protect your online identity

- Change your passwords to your database and WP user accounts
- Check your computer for malware
- Update your site and plugins

Investigate the attack

- Consider checking up the backed up copy of your site
- If the attack is made via a flaw in WP, file a bug or inform the mailing list

http://ottopress.com/2011/how-to-cope-with-a-hacked-site/

http://codex.wordpress.org/FAQ_My_site_was_hacked

Overwhelmed yet?

photo by Flickr user andresthor

VaultPress

- Paid service offered by Automattic to backup, scan, and protect your WordPress website
- Makes it easy to restore site backups
- Worth it if you don't have the time or want to manage things yourself

Once more

- Your site can be better protected with just a little effort
- It's all about raising the bar!
- Backups, backups, backups!

Thank You!
Questions?

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