Local Development

*with Version Control*

*presented by The Jake Group*
Mark Jaquith says...

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Coding Scaling
and
Deploys

OH MY!
What is local dev?

- Working on an isolated copy of a site on a single computer
- Not accessible to/by the public
- Not live on a server
Why local?

- Local is faster.
- Local is safer.
- Local is easier.
- Local is cheaper.
- Local is more collaborative.
Local is faster.

- No uploads
- No downloads
- No loading remote resources during testing
- Internet down? Keep working
- On an airplane? Keep working
Local is safer.

- Less file confusion/overwriting
- Safer to go live (you always have a private test version)
- Fewer launch-time edits (dupe your local DNS)
- Less FTP (which is inherently insecure)
- No worrying about search engines stumbling upon your ultra-secret site
- Extra accountability
- Find bugs more quickly
Local is easier.

- Stop commuting: work from the comfort of your own file system.
- Find and replace easily
- Use tools not available on a server (LiveReload)
- Freedom to experiment.
Local is cheaper.

- Saves bandwidth and production server resources
- Saves time, and time is money
Downside?

I would suggest that there are none

But for the sake of argument...
The full site exists on each development machine, so two developers means two copies of the site.

But... space is cheap. Time isn’t.

Conservatively: the size of a site is worth 3 seconds ($0.07 per GB, 10 sites per GB. Developer paid minimum wage.)
Learning Curve

Yes, but true of anything new
Collaboration

Local dev sounds good for a lone freelancer

How could it possibly be good for a team?
Local is MORE collaborative.

- Counterintuitive, but true
- Work on the same file, at the same time
- Lawson’s missing semicolon doesn’t crash the site Tyler is trying to theme
- But the true power lies in .....
Version Control

_a crash course_
Why version control?

- See who changed what, when, and why
Why version control?

- Track the history of your project’s files (and take a trip back in time if you need to)
Why version control?

- Work on long-term projects at the same time as short-term maintenance tasks... in the same directory
Why version control?

Keep the team (and your servers) in sync
So what is git?

Git is a version control program that sets up shop in a project folder and proceeds to remember every change ever made to every file, forever.

Note: changes, not files
Git’s got your back.

- Ahhhhh! I just deleted the whole site!
- Tell git to remember how things were back before you screwed up big time.
- Instantly revert your files back to any point in history
Git’s social.

- Each git-ified folder is very good at chatting with other git-ified folders.
- They have a number of very cool commands that can be extremely useful.
Pushing and Pulling

- Teams need one authoritative location for code.
- A single, central repository (repo) manages the inclusion/exclusion/combination of all the team’s work.
Pushing and Pulling

- “Push” to add a change to the central repository
- “Pull” to collect your teammate’s changes
Woah now.

- What if you changed the same exact file as somebody else on your team? Who’s version wins?
- Changes, not files!
- Git merges all non-conflicting changes together automatically
- Time for an example
Central Repo

Tyler's Repo
Tyler's Computer

Lawson's Repo
Lawson's Computer
Central Repo

Push (fails)

Tyler’s Repo
Tyler’s Computer

Lawson’s Repo
Lawson’s Computer
Central Repo

Tyler’s Repo
Tyler’s Computer

Lawson’s Repo
Lawson’s Computer

P U S H
Central Repo

Tyler’s Repo
Tyler’s Computer

Lawson’s Repo
Lawson’s Computer
Central Repo

Tyler's Repo

PULL

Tyler's Computer

Lawson's Repo

Lawson's Computer
Everyone’s happy.

But what about our poor server?
Summary

- Local dev + git = awesome
- The ease, power, and flexibility of working in isolation.
- The advantages of social coding
- The security of a time machine and an authoritative source
If you would like to learn more, or are in need of an implementation consult, we’d love to hear from you!

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