

I made a website!
Now what?

Sebastian Witowski

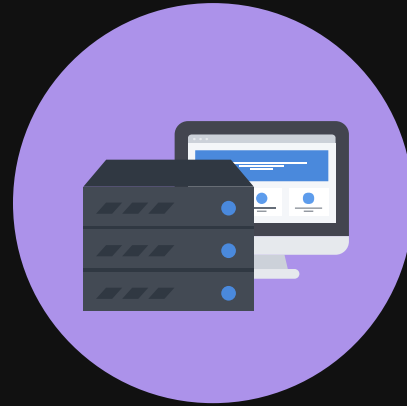
Disclaimer

There are many great tools at CERN (OpenShift).

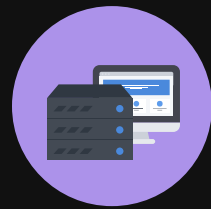
This presentation is not about those tools.

**This presentation is about
external tools**





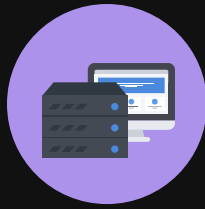
Hosting



Cloud hosting

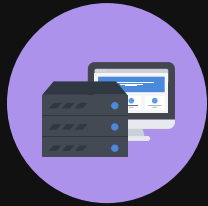
Physical server vs VPS:

- Billed for real usage (per second on AWS)
- Easy to scale



Hosting providers

- **AWS** (EC2 and Amazon Lightsail)
 - Free tier for 1 year (2x t2.micro, 1 DB, 5GB storage, etc.)
 - *Complex pricing model*
- **DigitalOcean**
 - From \$5/month (512MB RAM, 20GB storage, 1TB transfer)
 - Additional storage from \$0.10/GB/month
- **Linode**
 - From \$5/month (1GB RAM, 20GB storage, 1TB transfer)
 - Additional storage from \$0.10/GB/month
- **Heroku**
 - PaaS: more expensive, but easier to use (less configurable)
 - 1 dyno free forever (512 MB RAM, 10k PostgreSQL rows)



Server parameters

- **Storage** - 20GB is plenty (use AWS S3 for more)
- **Transfer** - 1TB is usually more than enough
- **CPU** - 1 CPU is fine for simple website
- **RAM** - the more the better (caching, DB, etc.)



Cloud computing



When a VPS is not enough

- **AWS**

- Free tier for 1 year (VPS, DB, S3, Lambda and more)
- More features than competition
- Longest time on market == more 3rd party libraries

- **Google Cloud**

- \$300 free credits to spend during first 12 months
- "Always free" tier with VPS (1 f1-micro, 30GB storage), DB (1GB NoSQL), storage (5 GB), messaging, logging, serverless functions, but also NLP, speech and vision API

- **Azure**

- 30 days free trial with \$200 free credits, some services free for 12 months and some free forever
- Good support for Windows applications



Static websites



When a VPS is too much

- **GitLab pages**

- Supports any static site generator
- Free Continuous Integration
- Slightly more complicated setup

- **GitHub pages**

- Supports only Jekyll (to use other static site generators, you need to precompile files locally)
- Easy, out-of-the-box setup

Both are **free** and offer separate websites for projects and organizations.



With no back-end

- **Surge.sh**
 - Unlimited websites, custom domains and SSL for free
 - CLI and dashboard interface
 - Global CDN, clean URLs for SEO
 - Paid plan (\$13/month/project) - password protection, custom redirects, CORS
- **Netlify** - same features as Surge, plus:
 - Compatible with all main static site generators
 - Form handling
 - 1-click rollbacks
 - Assets optimization
 - Split testing



With a *simple* back-end

- **Firebase** (free plan)
 - Hosting (1 GB stored, 10 GB/month transferred)
 - Database (1 GB and 100 connections)
 - Cloud storage (5 GB of storage, 1 GB/day bandwidth)
 - Sync data between devices (1 GB of storage, 10 GB of bandwidth)
 - Cloud functions (125K invocations per month, 40K CPU-seconds and GB-seconds)
 - Authentication
 - Analytics, performance monitoring
 - Test lab (10 test/day on a virtual device and 5 test/day on a physical device)



Domain



Domain providers

- **Namecheap**
 - \$10.69 for **.com**, \$12.48 for **.org**, \$32.88 for **.io**
- **Namesilo**
 - \$8.99 for **.com**, \$10.79 for **.org**, \$42.99 for **.io**
- **1&1**
 - \$14.99 for **.com**, \$19.99 for **.org**, \$49.99 for **.io**
 - **1st year:** \$0.99 for **.com**, \$0.99 for **.org**, \$34.99 for **.io**



SSL certificate



Let's Encrypt

The screenshot shows the Let's Encrypt website homepage. At the top left is the Let's Encrypt logo, and at the top right is the text 'LINUX FOUNDATION COLLABORATIVE PROJECTS'. Below the logo are navigation links: 'Documentation', 'Get Help', 'Donate', and 'About Us'. The main content area features a large banner with the text: 'Let's Encrypt is a new Certificate Authority: It's free, automated, and open.' Below this text is a 'Get Started' button. At the bottom of the page, there are two sections: 'FROM OUR BLOG' and 'MAJOR SPONSORS'. The 'FROM OUR BLOG' section includes a date 'Oct 24, 2016' and a link to 'Squarespace OCSP Stapling Implementation'. The 'MAJOR SPONSORS' section displays logos for mozilla, Akamai, CISCO, and others.

Over **1 000 000** free certificates issued.

Very easy to follow **installation instruction**.

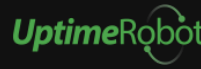

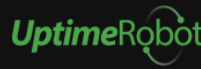

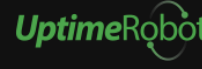
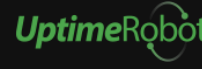


Monitoring



Is your website up?

 and  **StatusCake**

- Free
- 5 minutes check rate
- 50 monitors () vs unlimited ( **StatusCake**)
- 1 location () vs 1 random location ( **StatusCake**)
- Integration with email, webhooks, Twitter, Hipchat, Pushbullet, Slack and many more
- Content matching ()
- Free email-to-SMS ()
- Paid SMS packages



Web analytics

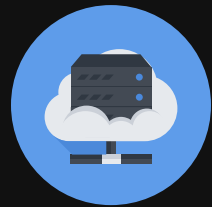


What your users do?

- **Google Analytics** - free and packed with features, but not much privacy.
- **Piwik** - free and open source that you can install yourself.
- **Heap** - when you don't know what events you are interested in yet.



Files storage



Amazon S3

- Prices from **\$0.023** - **\$0.025** per GB (USA or Europe)
- Prices go down to **\$0.004** per GB (Glacier Storage)
- Transferring data out costs **\$0.05** - **\$0.25** per GB
- Free transfer of data into S3
- Free transfer of data between services (the same region)
- Plenty of plugins and libraries



CDN



Pay as you go

- **Amazon CloudFront**
 - Transfer price: **0.085 - 0.25 \$/GB**
 - Free storage
 - Paid transfer between data centers and HTTP(S) requests
- **CDN77**
 - Transfer price: **0.049 - 0.185 \$/GB**
 - Free storage (up to 50GB)
 - Free HTTP(S) requests
 - Minimum recharge: **\$149** (valid for 1 year)



Monthly plans

- **CloudFlare**
 - Free package: 3 page rules
 - \$20/month: 20 page rules
 - \$200/month: 50 page rules
- **MaxCDN**
 - 100GB/month (2 PoP): **\$9**
 - 500GB/month (3 PoP): **\$39**
 - 1TB/month (5 PoP): **\$79**
 - **\$15** per month to use PoP outside of US and Europe



Error tracking



Finding bugs in production

- **Sentry**
 - Free: 10k events per month, 7 days history, 1 user
 - Paid plans starting from \$26/month (100k events, 90 days history, unlimited users)
 - [Open source version](#) that you can host yourself
- **Rollbar**
 - Free: 5k events per month and 30 days history
 - Paid plans starting from \$49/month (100k events, 180 days history)
 - Unlimited users, unlimited projects
- **Airbrake** - free plan for 1 user, 25 errors/min, 30 days history



Sending emails



Email campaigns

- **MailChimp**
 - 12,000 emails per month for free
 - 2,000 subscribers for free
 - Transactional emails with mandrill (in paid plans)
- **SendinBlue**
 - 9,000 emails per month (max 300 per day)
 - Unlimited subscribers
 - Also transactional emails (free)
 - Transactional SMS (paid)



Transactional emails

- **Amazon SES**
 - 62,000 free emails per month
 - Attachments: \$0.12/GB
 - Fees for receiving emails
- **Mailgun**
 - 10,000 free emails per month
 - Free incoming emails
 - Attachments up to 25MB (free)
- **SendinBlue**



Continuous Integration



Hosted services

- **Travis CI** (for GitHub)
 - Free for open source (public) and students
 - Paid plans starting from \$69/month
 - First 100 builds are free (total, not per month!)
- **Circle CI** (for GitHub and Bitbucket)
 - 1500 build minutes for free
 - Additional containers cost \$50/month
 - FOSS gets 4 Linux containers and OS X plan for free
- **Codship** (for GitHub, Gitlab and Bitbucket)
 - 100 builds/month free
 - Paid plans starting from \$49/month



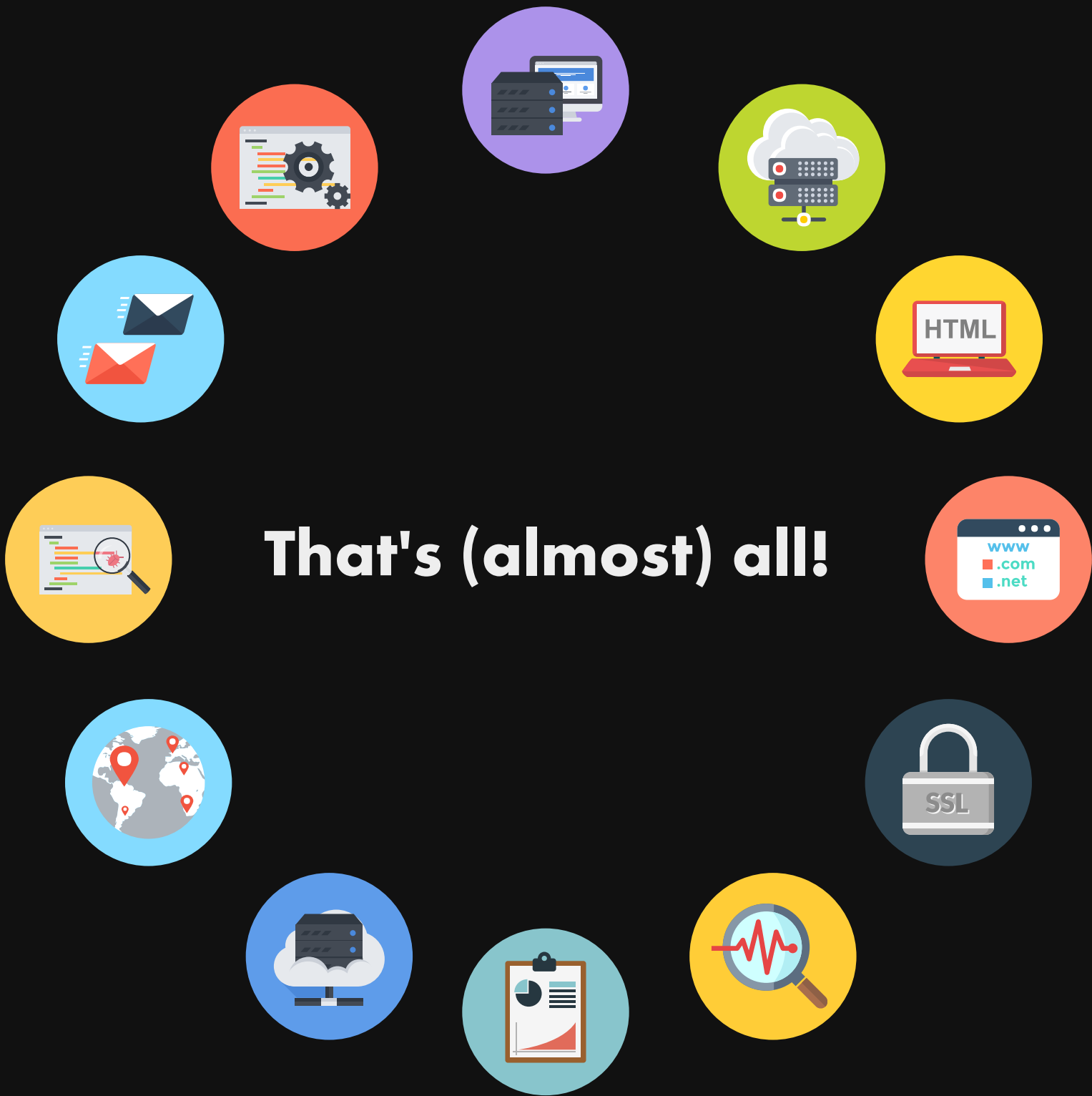
Self-hosted software

- **Jenkins**

- Free and open source
- Self-contained, easy to install Java program
- 1000+ plugins
- Cross-platform

- **GoCD**

- Free and open source
- Paid support provided by ThoughtWorks
- Multiple plugins
- Cross-platform



That's (almost) all!

Stack on a budget

The screenshot shows a GitHub repository page for 'Stack on a budget'. At the top, it indicates '255kb committed on GitHub Merge pull request #149 from ehteng/master' and 'Latest commit 2994d46 on Jun 21'. Below this is a commit history table:

File	Commit Message	Time Ago
pages	Updating Sentry's pricing	4 months ago
.travis.yml	Update travis script	7 months ago
CONTRIBUTING.md	Moves pages in a folder	10 months ago
LICENSE.md	Add MIT license	a year ago
README.md	Merge branch 'master' of https://github.com/joselufa/stack-on-a-budget ...	5 months ago

Below the commit history, the 'README.md' file is selected and displayed. The content of the README is as follows:

Stack on a budget

Table of Contents

- **Activity feeds**
 - PubNub
 - Pusher
 - Stream
- **App hosting**
 - AppHarbor
 - AWS EC2
 - Azure App Service
 - GearHost
 - Gomix
 - Google App Engine
 - Google Compute Engine
 - Heroku
 - IBM Bluemix
 - OpenShift
 - Zeit Now
- **Application performance monitoring**
 - Opbeat
- **App Testing**
 - Sauce Labs

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StackShare In The Press

	Docker Containers	3.66K Votes	1.36K Fans	5.45K Stacks
	Heroku PaaS	3.07K Votes	1.17K Fans	3.09K Stacks
	Slack Team Messaging	5.82K Votes	2.32K Fans	7.6K Stacks

Student Developer Pack

DigitalOcean (50\$ credits), **GitHub** (unlimited private repos), **Namecheap** (free .me domain), **SendGrid** (15k emails per month), **Sentry** (500k events per month, unlimited projects), **Stripe** (waived transaction fees on first \$1000), **Transifex** (\$99 plan for free)

Student Developer Pack

The best developer tools, free for students



Learn to ship software like a pro

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There's no substitute for hands-on experience, but for most students, real world tools can be cost prohibitive. That's why we created the GitHub Student Developer Pack with some of our partners and friends: to give students free access to the best developer tools in one place so they can learn by doing.

Get your pack

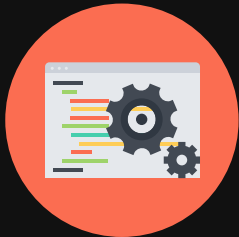
THE TOOLS



Access to the AWS cloud, free training, and collaboration resources

DETAILS

Student Developer Pack members receive up to \$110 in bonus AWS credits for a total of \$75-\$150



**Do you know
any tools?**



**Or do you have
any questions?**

