Bitcoin.org Quarterly Report (March 2015)

> "This is awesome and sorely needed. [. . .] Appreciate everything you do for the community, keep up the great work!" —/u/wserd on Reddit about the new Full Node page (source)

Summary for December 2014, January 2015, and February 2015.

- **Quarterly page views:** over 7 million.

- **Translations:** Bitcoin.org now has fully proofread and complete translations for 26 languages. New and significantly-improved translations added this quarter include Bulgarian, Greek, Polish, and Turkish.

- **Developer documentation:** added 114 new or completely rewritten printed pages worth of text describing Bitcoin Core's RPC interface and 8 more pages describing its new HTTP REST interface. Bitcoin Core 0.10.0's new headers-first sync is now documented as is the older blocks-first sync. Begun in the previous quarter, this quarter also saw the completion of over 30 printed pages worth of text describing the Bitcoin peer-to-peer network.

- **Contributors:** long-time site maintainer Saïvann Carignan, who has made over 1,000 commits during the past two years, has announced he no longer has time to lead the project. A search is on for new volunteers who are willing to contribute to one of most trusted Bitcoin resources on the Internet.

- **Wallets:** reviewed and added three new wallets to the Choose Your Wallet page, and all previously-listed wallets now support HTTP Strict Transport Security (HSTS) for secure parts of their sites.

- **User guides:** A new guide has been published to the site providing detailed instructions for supporting the network by running the Bitcoin Core full node. The announcement of the page received over 200 upvotes on Reddit.

Translations

> "Muchas gracias por atender esto inmediatamente, ¡y por el trabajo realizado!" (Many thanks for doing this immediately, and for all the work done!) –Adamantike on Transifex.com
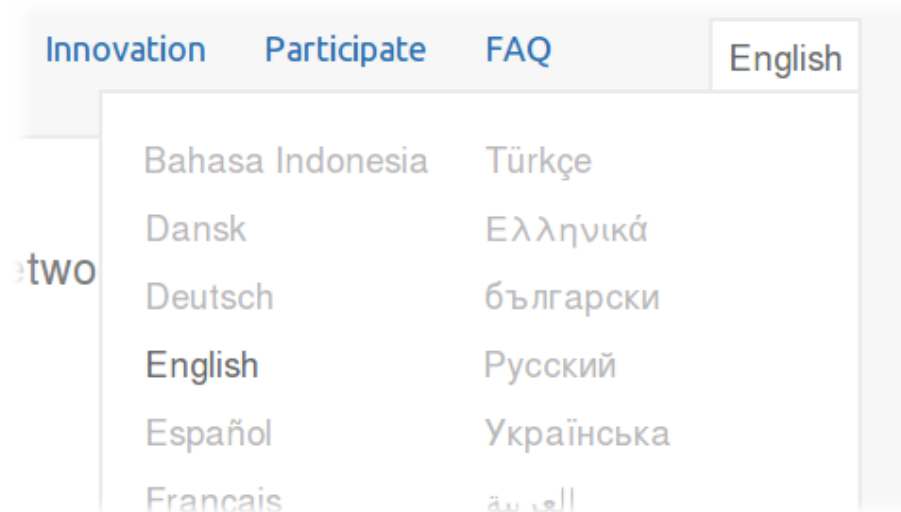

Figure 1: Bitcoin.org available in 26 languages

Non-US/UK visitors accounted for 35% percent of Bitcoin.org's traffic this quarter, about 2.5 million page views. Future translation work will likely depend on how the English portion of the site is changed in the coming months.

- **Newly proofread:** Bulgarian, Polish, and Turkish translations

- **FAQ translated:** the longest localized page on the site, the FAQ has now been translated into Polish and Turkish.

- **Newly added:** a Greek translation

- **Updated:** this quarter saw updates small and large for the translations to Bulgarian, Chinese (Traditional), Chinese (Simplified), Danish, Dutch, French, German, Greek, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Persian, Polish, Portuguese, Romanian, Russian, Swedish, Turkish, and Ukrainian.

We are extremely grateful for all the translations contributed by volunteers and paid translators on our Transifex project page as well as the many reviews made by Saïvann Carignan.

Developer documentation

> "Nice work!" —Jonas Schnelli about the new HTTP REST documentation (source)

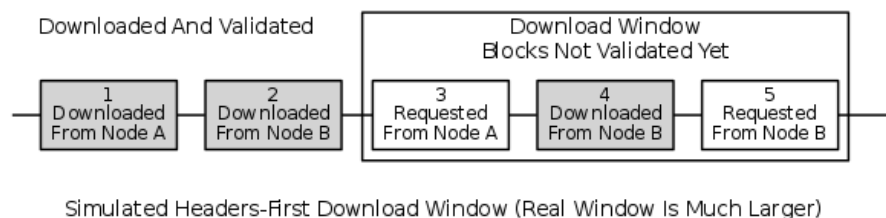Simulated Headers-First Download Window (Real Window Is Much Larger)

Figure 2: Illustration from new headers-first documentation

The three main developer documentation webpages received a total of about 90,000 page views this quarter. Accomplishments this quarter include:

- **RPC rewrite:** added 114 new or completely rewritten printed pages worth of text describing Bitcoin Core's RPC interface and 8 more pages describing its new HTTP REST interface.

- **What's headers first?** Bitcoin Core 0.10.0's new headers-first sync is now documented as is the older blocks-first sync.

- **P2P protocol:** begun in the previous quarter, this quarter also saw the completion of over 30 printed pages worth of text describing the Bitcoin peer-to-peer network.

- **Ease contribution:** nearly every subheading now includes links that allow instant submission of corrections or reporting of issues related to the text.

- **Documentation is not a specification:** relaying comments frequently made by Bitcoin Core developers, we now make clear that the documentation is not a specification

- **Bitcoin Core 0.10.0:** many small changes were made to update the documentation to accurately describe Bitcoin Core 0.10.0 behavior.

Most documentation was written by David A. Harding, with reviews conducted by Saïvann Carignan, Jonas Schnelli, and others.

Regular Updates

"Great!"
"Thanks."
"Thank you!"
—Users after we helped promote their Bitcoin events (sources: 1, 2, 3)

Figure 3: Excerpt from the Events page map

The English homepage and Getting Started page by themselves received over 2.0 million visits this quarter. These and other regular content pages are often updated based on suggestions by first-time contributors, with the bulk of updates going to the Events page and the Resources page (and its many translations).

- **Update events:** listed 20 new events in addition to the events automatically listed by the site software.

- **Update links:** updated redirected or broken links, as well as removed or redirected links that point to resources our contributors no longer think are useful.

- **Localize links:** pointed links to relevant local resources for some languages.

- **Add non-profit link directory:** added the excellent non-profit link directory compiled by GiveBTC.org.

- **Mention innovative technology:** added the Lighthouse P2P crowd-funding platform to the list of innovative Bitcoin technology.

We are grateful to all of the contributors who opened issues and made pull requests to keep the site content current and useful.

Wallets

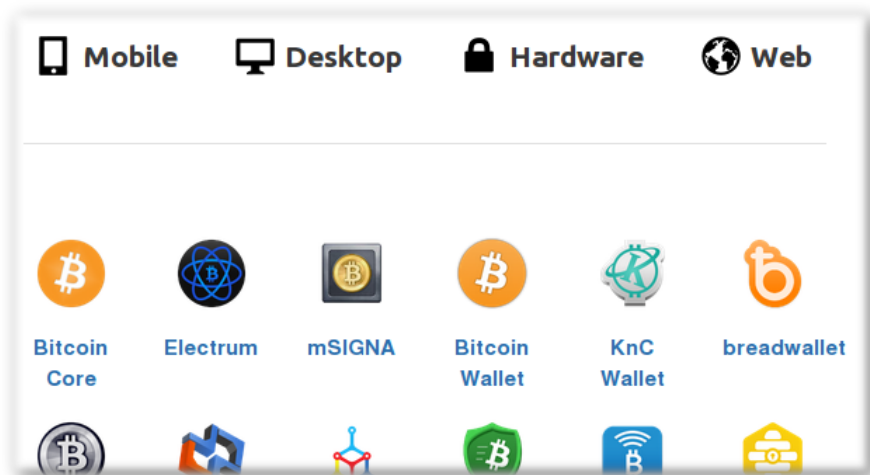> "Thank you! Good catch!" —GreenAddress on GitHub after we discovered a bug in the new GreenBits wallet (source)

Figure 4: Just some of the wallets currently listed

The Choose Your Wallet page is one of our most visited pages—just the English version of the page alone has received over 400,000 visitors this quarter. However, maintaining the page is also one of our most time-consuming activities due to the number of wallet authors who want us to include their wallet on the page.

- **New wallets:** we reviewed and added three new wallets Airbitz, Circle, and Coinapult.

- **Made HSTS a requirement:** after contacting eight wallet providers and asking them to enable HTTP Strict Transport Security (HSTS) on their sites, all eight eventually agreed to use this simple server setting to help prevent possibly-devastating man-in-the-middle attacks.

- **Removed Blockchain.info:** although a very popular wallet service, Blockchain.info was delisted after a polite online discussion with its CEO. A period of 60 days was chosen, after which they may apply to be relisted.

- **Published wallet requirements:** a set of wallet requirements and guidelines were discussed and published, allowing wallet authors to evaluate for themselves whether their wallet would be a good fit for Bitcoin.org.

Saïvann Carignan spearheaded all the wallet efforts above, although we are also grateful to the many people who commented on the wallet issues and pull requests.

As Saïvann has become too busy to continue maintenance of the wallet section of the site, we are actively looking for a volunteer to take over reviewing wallets and managing wallet requirements. This is a great volunteer position for anyone who likes trying new wallets and who wants to interact directly with wallet authors.

New Full Node Guide

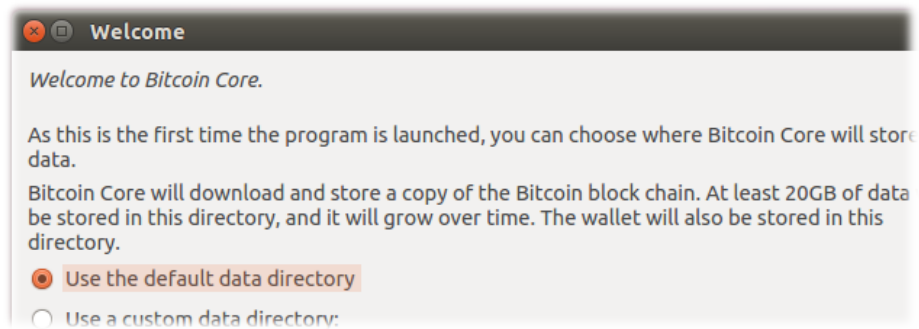> "Awesome, thanks for writing this down!" —Andreas Schildbach on GitHub (source)

Figure 5: Screenshot included in the full node guide

Fulfilling a request made by Wladimir J. van der Laan, Bitcoin Core's lead developer, we were proud to write and publish a guide to running a full node this quarter. The goal is to encourage users to run full nodes when possible to support the Bitcoin network.

As of February 28th, the full node guide has been published for only five days and has received over 4,000 page views.

- **Target multiple OSes:** initial instructions are provided for Ubuntu Desktop and Ubuntu Server, other Linux distributions (desktop or server), and Windows 7 (desktop only). New volunteers have begun the process of contributing Windows 8.1 instructions, and we are still looking for a Mac user to contribute OS X instructions.

- **Describe opening port 8333:** thanks to the core developers, running Bitcoin Core is easy. The hard part for some users is opening port 8333, so we provide detailed instructions for just that aspect.

- **Detail risks:** feedback from a core developer encouraged us to make it clear that running a full node isn't always easy, so users who read our guide won't become demoralized and give up on running a full node forever the first time they encounter a problem.

- **Over 200 upvotes:** soon after release, the guide was submitted to Reddit where it received over 200 upvotes and a rare "98% upvoted" quality score.

The guide was primarily written by David A. Harding, with reviews by Saïvann Carignan and Jameson Lopp, and promotion also by Jameson.

Website Improvements

"Confirmed it works. Thanks a lot!" –Wladimir J. van der Laan on GitHub about the updated Download page (source)

Sometimes small tweaks to the site can have a large impact. Some of the changes made this quarter include:
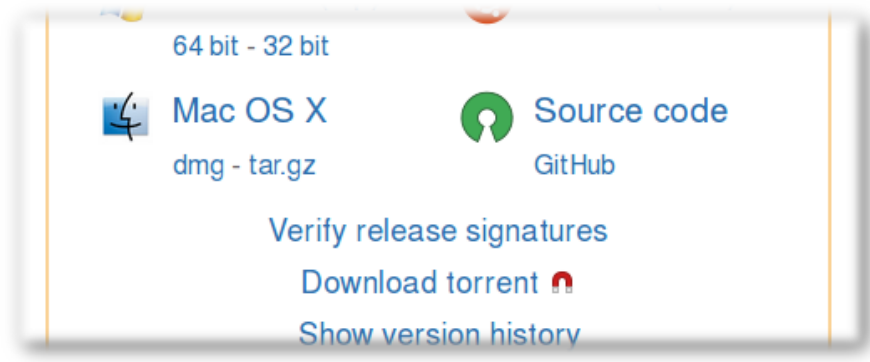

Figure 6: New torrent and magnet links

- **Bitcoin Core 0.10.0:** it is our privilege to help the core developers release new versions of Bitcoin Core by updating the Download page and the hosted release notes. For the 0.10.0 release, we added a torrent file and magnet link to help ensure availability of the files even if Bitcoin.org goes down.

  The new torrent has been downloaded over 900 times and there are at least 44 active seeders as of February 28th.

- **Image optimization:** 83 SVG images were optimized, saving over 250 KB of disk space and a significant amount of bandwidth, as well as helping users on slow connections read the site more quickly.

- **Release ordering:** as the core developers plan to backport the BIP66 changes to older versions of Bitcoin Core, we've made sure the release notes on the site are ordered by version number rather than date so that we always recommend the highest version of Bitcoin Core to new users.

Saïvann Carignan wrote the code to enable the torrent and magnet links as well as sorting releases by version number. J. Louis optimized the SVG images.

Server And Development Tools

> "I don't know what people are complaining about... I think it's pretty great actually!" —/u/itsgremlin on Reddit about Bitcoin.org in general (source)
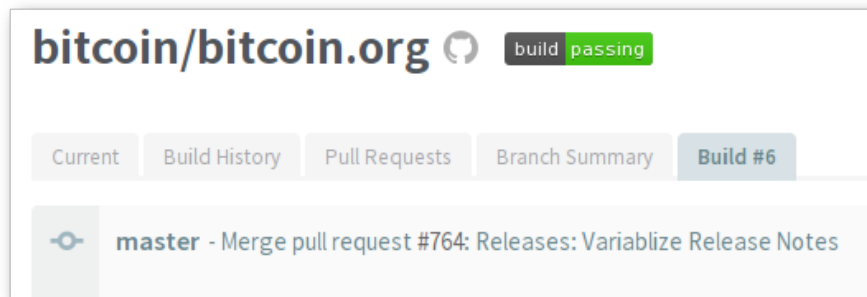

Figure 7: Travis CI verifying the site builds correctly

With 7 million page views per quarter, Bitcoin.org serves an average of 54 pages a minute—so even a single second of downtime might prevent us from helping a Bitcoin user. This quarter we took additional steps to ensure that the site works correctly while also attempting to make it easier for new volunteers to contribute to keeping the site accurate and updated.

- **Continuous integration:** each new pull request improving the site is now automatically built using Travis CI, allowing contributors to quickly discover bugs in their code even if they don't compile the site themselves.

- **Troubleshooting:** investigated slow bandwidth issues with downloads.

- **Preventive maintenance:** mitigated DDoS attacks and made sure stats are not affected by attacks. Also set Content-Security-Policy policies against XSS attacks.

- **Guide volunteers:** added a list of suggestions for new contributors so they can dive in immediately.

- **Audits:** wrote an automated script that will send an alert when sensitive parts of the site are changed or when Bitcoin Core downloads are missing correct signatures.

Travis CI support was added by David A. Harding with advice and support from Cory Fields, Wladimir J. van der Laan, and Pieter Wuille. Troubleshooting was performed by Saïvann Carignan with the help of GitHub user @patrikr, Christopher Gurnee, and David. Preventative maintenance and audit code were contributions by Saïvann, and the volunteer quick start guide was contributed by David.
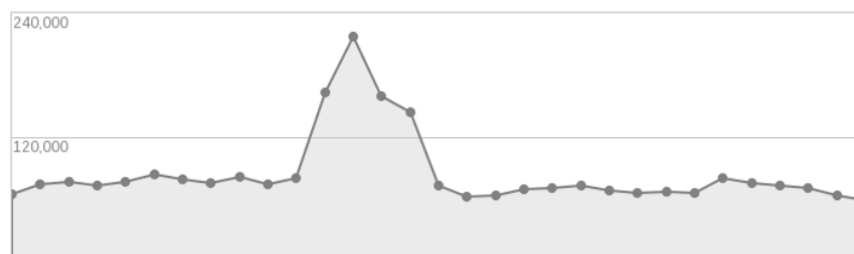
Public Website Statistics

"38,135,685 page views [since January 2014]" —The stats page
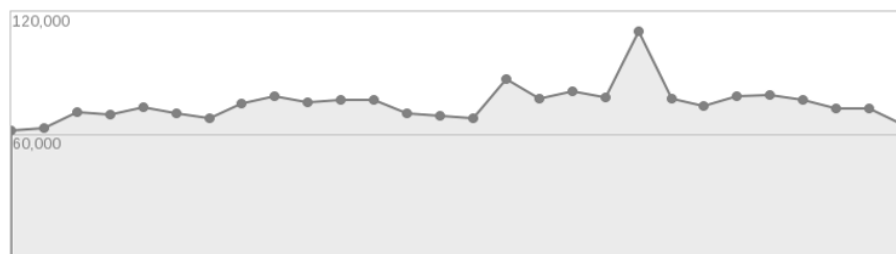
bitcoin.org - 2014-12
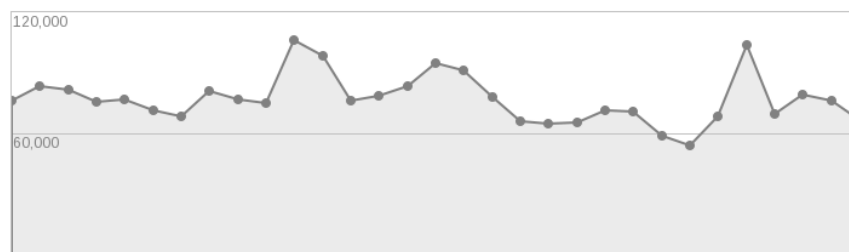
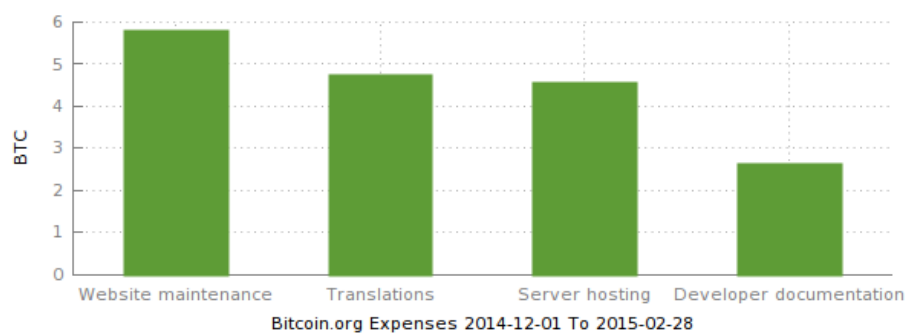2,388,638 page views

bitcoin.org - 2015-01

2,629,260 page views

bitcoin.org - 2015-02

2,095,787 page views

Expense Report

Bitcoin.org Expenses 2014-12-01 To 2015-02-28

Previous balance	4.994 784 06 BTC
Foundation's sponsorship	20.779 976 01 BTC
Website maintenance	-5.786 595 31 BTC
Translations	-4.735 938 00 BTC
Server hosting	-4.552 368 00 BTC
Developer documentation	-2.614 684 15 BTC
New balance	8.085 174 61 BTC

Next Quarter's Goals

> "I'm running a full node (~20 connections) with Bitcoin Core Version v0.10.0rc1 (64-Bit) on Windows 8.1 and willing to help out!"
> —Volunteer on GitHub for the Full Node page (source)

In addition to Bitcoin.org's recurring goals, such as funding the servers (currently about $600 USD per month), we hope to accomplish the following three major goals during the next quarter:

1. **New wallet maintainer:** we're seeking a volunteer to review new wallets for inclusion on the Choose Your Wallet page, as well as to monitor existing wallets for problems and to propose new criteria that allow us to only recommend the very best wallets.

2. **New developer documentation:** the developer documentation is currently 250 printed pages long, and on May 24th it will celebrate its one-year anniversary on Bitcoin.org. In the upcoming quarter we plan to add about 50 more printed pages worth of content, including:

   - A glossary/vocabulary page providing definitions for the over 150 specialized terms and synonyms used in Bitcoin development

   - Documentation for at least the most common op codes, and possibly all the enabled op codes. This section will be essentially a more detailed version of the Bitcoin Wiki script page

   - Improved type information in the RPC and REST sections, as requested by Ocaml-Bitcoin developer Dario Teixeira.

   - Substantially revising and expanding the current wallet section, likely leading to a new section focused on ECDSA keys and signatures.

   - Continuing to expand the overview of the Bitcoin P2P protocol.

3. **Better volunteer resources:** we want to make it easier for community members to volunteer to contribute to Bitcoin.org in ways both small and large. New documentation about site procedures is forthcoming and we will be looking for other ways to encourage and simplify first-time contributions.

Thanks To Sponsors And Volunteers

> "Thank you for your sponsorship and your support of our work!"
> —Saïvann Carignan

> "The Foundation provides us a modest monthly grant so we can pay
> for servers and some other stuff, and we put their logo on the bottom
> of the page and write a quarterly report telling them what we've
> accomplished thanks to their sponsorship. Beyond that, they let us
> make our own decisions, for which independence we're quite grateful."
> —David A. Harding on Reddit (source)

We thank The Bitcoin Foundation for their continued financial support of the
site, and extend our heartfelt appreciation to the 15 people who contributed
commits this quarter and the much larger number of people who provided
valuable feedback in over 439 comments on pull requests and issues.

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*If you have any questions about the content of this report, please open an issue
on GitHub or email Dave Harding, dave@dtrt.org.*