

Social networking the FOSS way with Diaspora

POD PEOPLE

Diaspora is a free and open source decentralized social network consisting of millions of independently run pods. Join an existing pod or set up your own with minimal programming skills. *By Nate Drake*

Social networking and privacy hardly go together like peanut butter and jelly. Social network giants such as Facebook routinely track your location; the Chrome extension *Marauder's Map* will even plot your friend's movements based on data from Facebook Messenger [1].

Even those people who switch off location services or connect via Facebook's "dark web" address are required to register an account in their own name

instead of an alias or nickname [2], which has caused trouble for people who happen to share the same name as a celebrity or have a name that doesn't follow western naming conventions.

Worse still, in the past, Facebook has faced allegations of using customers' personal data in unethical ways. This includes allegedly keeping account data even after it's been deleted, tracking users' movements across other websites, using facial recognition to tag people in

photos that they didn't upload themselves, a lack of transparency about government requests for data, and even using user "Likes" in advertisements [3]. In brief, in the words of Andrew Lewis [4], "If you are not paying for it, you're not the customer; you're the product being sold."

Fortunately, Facebook is not the only social network. The Diaspora Social Network [5] has been in active development since late 2010 and describes itself as an



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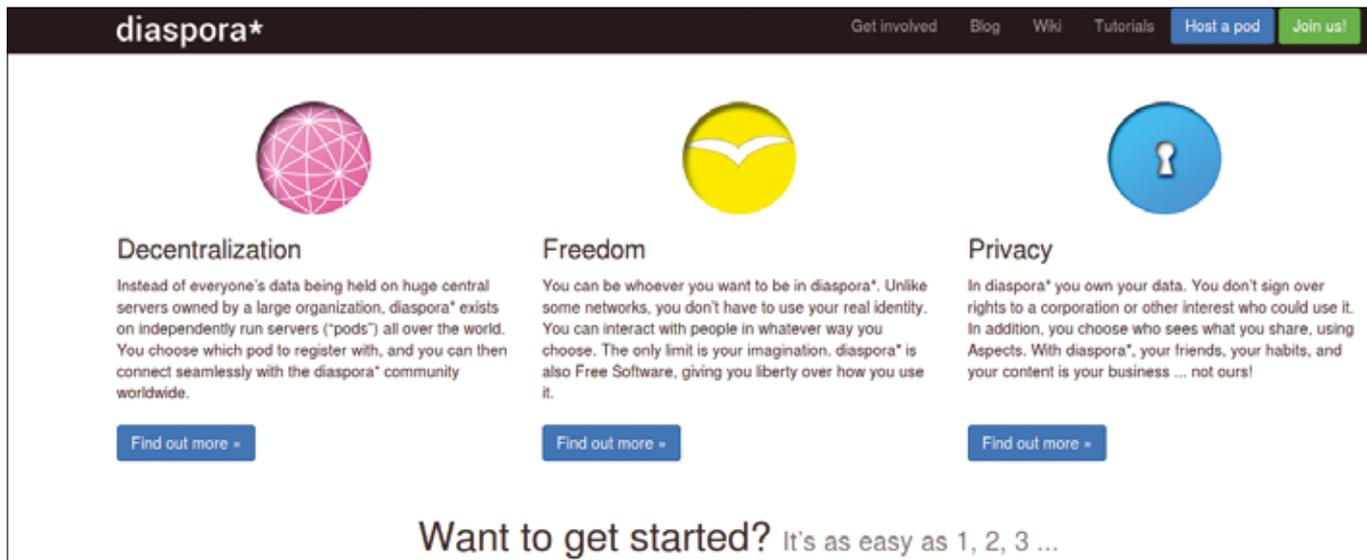


Figure 1: Diaspora emphasizes control of user data and freedom through decentralization and open source software.

“online social world where you are in control.”

The Diaspora Foundation, which is responsible for the project’s source code, further elaborates that the core philosophies behind the network are decentralization, freedom, and privacy (see Figure 1).

Decentralized Diaspora

One of the most exciting features of Diaspora is that user data is not held on any one central server. The Diaspora Foundation itself is part of the Free Software Support Network (FSSN) [6] and as such is much less susceptible to hostile corporate takeovers or gag warrants from shadowy government actors.

In practical terms, decentralization is also achieved through independently run servers or pods throughout the world. Each pod has its own domain name and is managed by volunteers on different servers in different locations [7]. Pods are federated in terms of sharing data, so it doesn’t matter with which server users register. For example, if Bob registers an account at US-based `diasp.org`, he can still share content with Alice who registered at Germany-based `despora.de`.

Although the fact that the pod is run by volunteers in a country with liberal data privacy laws isn’t an absolute guarantee that your content is safe, users remain in control of their data and

can delete it at any time. A list of available pods complete with uptime and active users is available on Pod Uptime [8], of which the most popular is Framasphere [9]. Although the servers are based in Germany, the website itself is run by a French community of open source developers known as Framasoft.

When choosing a pod on Pod Uptime, it’s advisable to try to find a location without any Orwellian surveillance laws but also to keep an eye on the software version they are running. At the time of writing, the current version is `v0.6.99.0`. Not all pods are open for registration of new users. Anyone who has trouble choosing a pod can simply click the

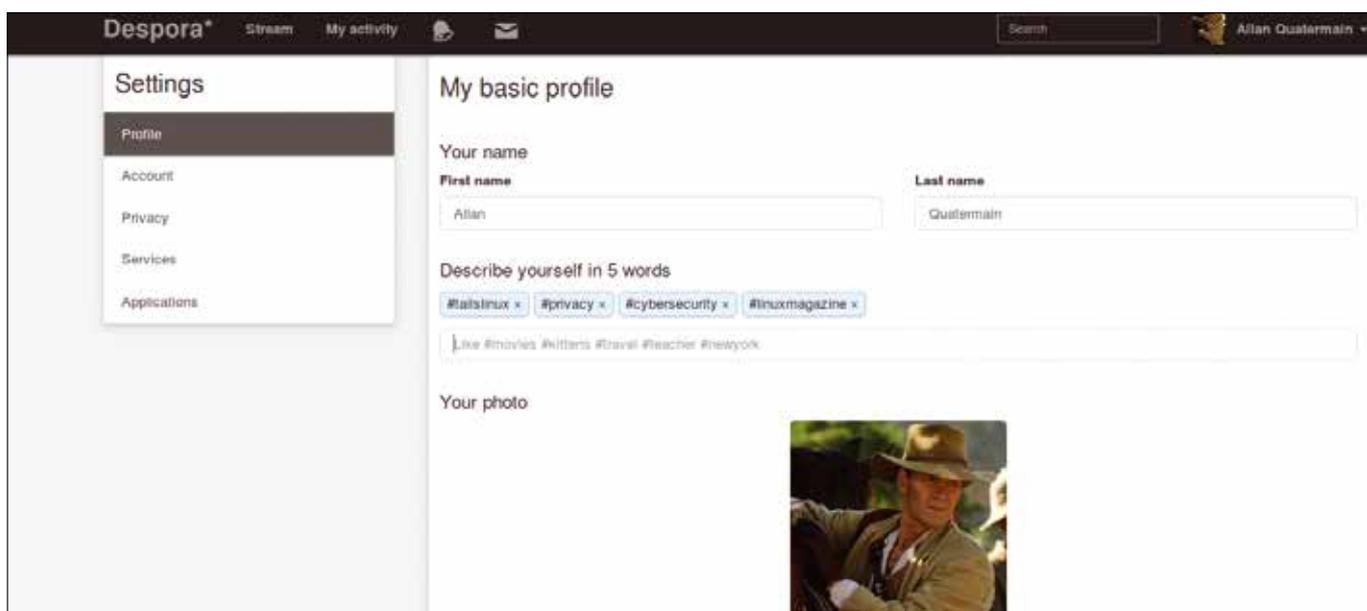


Figure 2: The author’s Diaspora account in the name of the fictional character Allan Quatermain. Users can add hashtags to their profile to allow others with similar interests to find them, such as `#linuxmagazine`.

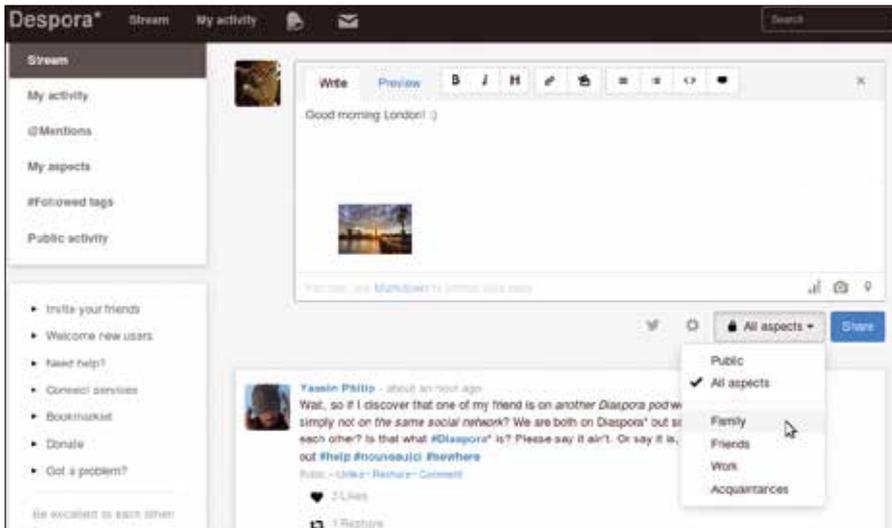


Figure 3: By default, posts are visible to all of a user's aspects. This can be changed to a public post or one or more aspects as needed.

large red button at the top, and the website will choose one automatically.

Diaspora Freedom

Aside from using free and open source software, Diaspora also protects user's privacy by allowing them to choose an alias or nickname. The only limit is one's own imagination.

The limits of this freedom do not extend only to using an imaginary name or username. Users are free to follow topics of interest through use of hashtags to see what famous people and companies have to say without alerting others. Users can also include tags in their "public profile" to allow others with similar interests to follow them [10] (see Figure 2).

As with Facebook, some of the data on users' profiles is public and some is private. Users who have specifically chosen to share information with one another can see their "extended profiles" (i.e., biography, gender, location, and birthday). Unlike with other social networks, users do not have to fill in this information. Public profiles are visible to any visitors to the website and simply consist of a user's chosen name and profile photo, as well as any posts they've specifically chosen to make public. These settings can be changed from the account page so that everyone can see a user's extended profile.

Diaspora Privacy

Diaspora's Privacy features go much further than masking profiles. The chief

difference between Diaspora and other major social networks like Facebook is that there is no advertising and therefore no money to be made in analyzing your browsing activities. The source code can be examined to verify that it's used for no other purposes than connecting and sharing data with users' family and friends. Only admins of pods with which you interact can view user data [11]. Privacy can be further ensured by hosting your own pod (see below).

By default, searches for other users are accomplished by searching for user@pod (e.g., macumazan@despora.de) or, if two people are using the same pod, simply by searching for their username. Each user remains in control of whether their profile can be found by other users through the search bar, resulting in much greater anonymity [12].

Sophisticated control of data is also possible through the use of aspects. Aspects are simply the way contacts are grouped in Diaspora. By default, the categories are Family, Friends,

Work, and Acquaintances. Sharing is asymmetrical, meaning that by default people cannot see others in their own aspect, nor does it follow that because a user adds a person to their aspect that the reverse is true (Figure 3).

This level of control is markedly different from Facebook and is best illustrated by an example. Imagine Diaspora user Allan phones in sick at the office to spend the weekend in London with his wife, Marie, and his son, Harry. To avoid being exposed for malingering, he can choose to share his holiday photos with only people within his Family aspect rather than with his colleagues. Marie, in turn, may have her own Family aspect, which includes Allan, Harry, and her sister, Stella. If she shares her holiday photos, these will be visible to her sister as well as her husband and son.

Cross-Posting

Given the huge market share of social network titans like Twitter and Facebook, it may be difficult to force the masses to join those who wish to make the switch. Mercifully, it's possible to register with Diaspora pods that support cross-posting to major platforms such as Twitter, Tumblr, Facebook, and WordPress (Figure 4).

The specific setup steps are available on Diaspora's Wiki, but in simplest terms this involves authorizing an app similar to a Twitter or Facebook bot to post on a user's behalf. This should mean each time that new content is



Figure 4: The despora.de pod supports cross-posting to Twitter. Note the app can also read tweets on users' timelines and track new followers.

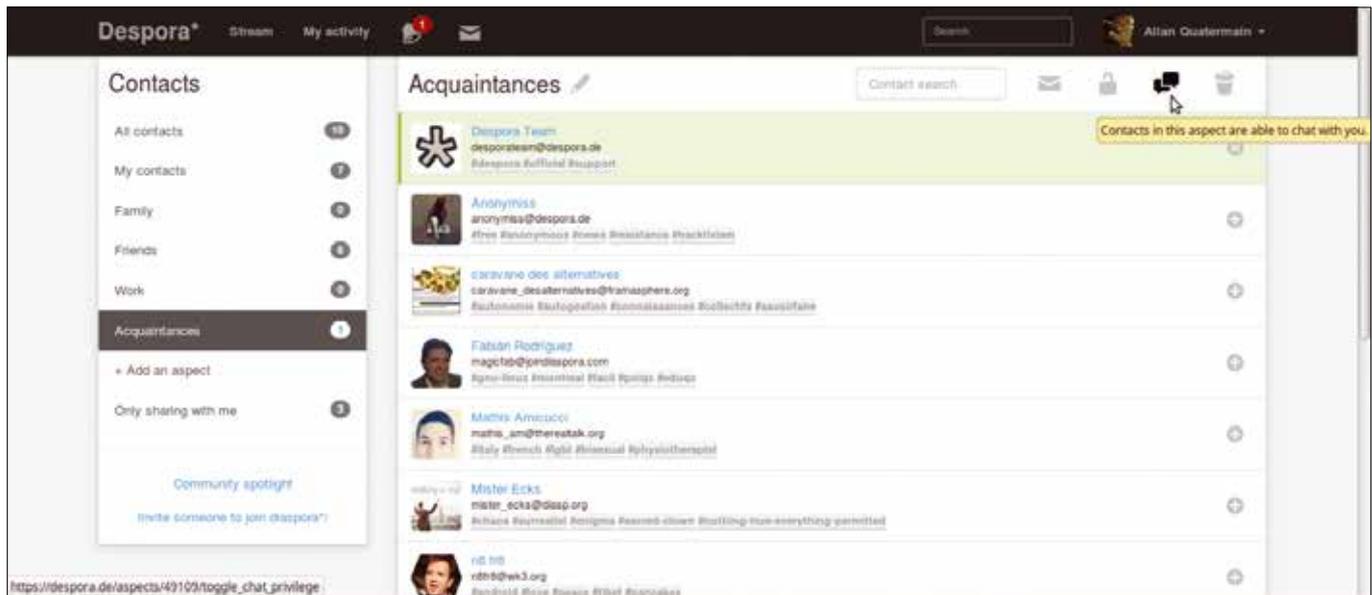


Figure 5: Click the chat icon at the top right to allow chatting with people within each aspect. For acquaintances, this is switched off by default.

shared on Diaspora it will also be posted by the corresponding app. The privacy of posts is determined when initially setting up the app. For example, all posts may be visible only to the account's Facebook friends.

Setting Up a Diaspora Pod

For readers whose appetites have been sufficiently whetted, simple setup guides for running one's own Diaspora pod are available on the Foundation's website. Debian-based distros such as Ubuntu are supported, as well

as CentOS, Gentoo, Arch, and Hamara Linux [13].

Whichever distribution is employed, the hardware requirements aren't very onerous. The website recommends at least 1.5GB RAM, 1GB swap space, and a decent multicore CPU. The amount of

1/2 ad

HDD space required will vary naturally depending on the number of users and the content shared.

For Raspberry Pi lovers, the Foundation says Diaspora will run on the Raspberry Pi Model 2 and 3 but is very slow and so not recommended for multiple users [14]. Diaspora requires several different components, so the Foundation recommends using a VPS or dedicated server over shared hosting servers.

In terms of software, Diaspora is written in Ruby. The Foundation recommends using Ruby Version Manager (RVM) to keep Ruby up to date and also to separate it from any other Ruby apps you may have installed. Diaspora is compatible with most app and web servers; however, the most common setup is using Unicorn for the app server and Nginx as the web server.

Users who are serious about running their own Diaspora pod will need an SSL certificate both to encrypt traffic between clients and the browser and to allow federation with other pods. Self-signed certificates or certificates issued by CACert won't work. The Foundation recommends obtaining a free TLS Certificate from providers such as Let's Encrypt, WoSign, or StartSSL [15].

Diaspora Drawbacks

Setting up a pod should pose no trouble for anyone with experience or server administration or Rails app deployment; however, there are support channels on Freenode in various languages for anyone who has difficulties [16].

As previously discussed, the admin of the pod has access to all registered users' data. Similarly, content shared by users with people registered to other pods will be visible to those "podmins" as well. There's also no way to isolate a pod from others without modifying the source code, so caution should still be exercised when posting content.

The decentralized nature of Diaspora can be abused, as it was in 2014 when ISIS supporters decided to join Diaspora after being kicked off Twitter. Although in technical terms the Diaspora Foundation could do nothing to stop people

from hosting their own pods, they did urge the community to report any offensive posts and worked with admins of the largest Diaspora pods to make sure extremists' accounts were deleted [17].

Podmins headaches also do not end with terrorism. Admins are specifically forbidden from integrating advertisements into a pod, meaning that each must be run as a labor of love, not for profit. There's also no automatic way to run backups of a server. The Diaspora Foundation recommends making copies of the public/uploads directory to back up images and then googling how to perform a dump of "Diaspora_databases" from the database server, which is less than elegant [18]. Users have also complained that downloading profile data is done via a JSON file, which is only machine readable, meaning users need to upload to a different pod to review what they uploaded [19].

By default, Diaspora doesn't come with an integrated chat feature as is available in Facebook, but the website's wiki does contain instructions to set this up on a pod via Prosody. The chat

feature also has to be enabled by users for each specific aspect (Figure 5). Sadly, use of Aspects means that it is currently impossible to create a group for people with similar interests as can be done easily on Facebook [20].

Quality over Quantity

A final word on this social network is that, beyond the code, Diaspora users in the nature of things tend to be more technically competent and privacy conscious. This means that there is a distinct lack of pictures of small animals, encouragements to copy/paste status updates, or dubious videos of celebrities.

Older users may be put in mind of the early days of the Internet when a certain degree of effort and knowledge was mandatory to get online, resulting in perhaps more high-brow conversations than we may see today on current social networks. This is also an important rejoinder to critics who may compare Diaspora's relatively miniscule user base of 1 million users to Facebook's one billion. Quality trumps quantity every time. ■■■

INFO

- [1] Marauder's Map: <https://github.com/arank/marauders-map>
- [2] What names are allowed on Facebook?: https://www.facebook.com/help/112146705538576?helpref=faq_content
- [3] 7 Controversial ways Facebook has used your data: <http://time.com/4695/7-controversial-ways-facebook-has-used-your-data/>
- [4] Andrew Lewis on Twitter: <https://twitter.com/andlewis/status/24380177712>
- [5] Diaspora Foundation: <https://diasporafoundation.org/>
- [6] FSSN: <http://freesoftwaresupport.org/>
- [7] Diaspora Wiki: https://wiki.diasporafoundation.org/Choosing_a_pod#Why_do_I_need_to_choose_a_pod.3F
- [8] Pod Uptime: <https://podupti.me/?advancedview=true>
- [9] Framasphere: <https://framasphe.org/>
- [10] Diaspora Wiki: https://wiki.diasporafoundation.org/FAQ_for_users#What_do_the_tags_on_my_public_profile_do.3F
- [11] Diaspora Foundation: <https://diasporafoundation.org/about#privacy>
- [12] Diaspora Wiki: https://wiki.diasporafoundation.org/FAQ_for_users#How_do_I_use_the_search_box_to_find_particular_individuals.3F
- [13] Diaspora Wiki <https://wiki.diasporafoundation.org/Installation>
- [14] Diaspora Foundation – Installation <https://wiki.diasporafoundation.org/Installation/Debian/Jessie>
- [15] Diaspora Foundation – Installation <https://wiki.diasporafoundation.org/Installation/Debian/Jessie>
- [16] Diaspora Wiki – How we communicate https://wiki.diasporafoundation.org/How_we_communicate#IRC
- [17] Islamic State fighters on Diaspora <https://blog.diasporafoundation.org/4-islamic-state-fighters-on-diaspora>
- [18] Diaspora Foundation – FAQ for Pod Maintainers: https://wiki.diasporafoundation.org/FAQ_for_pod_maintainers#Can_I_add_advertisements_to_my_pod.3F
- [19] GitHub: <https://github.com/diaspora/diaspora/issues/7147>
- [20] Diaspora Wiki – Integration/Chat: <https://wiki.diasporafoundation.org/Integration/Chat#Configuration>

AUTHOR

Nate Drake is a freelance journalist specializing in cybersecurity and retro tech.