

AT PRO TO COL

(THIS IS A BOF)

FOSDEM 2025

dietrich ayala

01.02.2025



(THIS IS A BOF)

AGENDA

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WHATPROTO?

02

WHENCE / WHY

03

ARCHITECTURE

09

HOWTO

06

EXAMPLERY

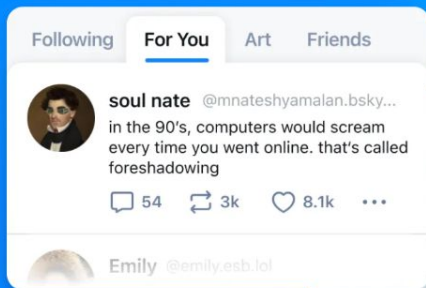
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CHATCHAT

WHENCE / WHY



Welcome to the *social internet.*



Bluesky is **social media as it should be.**
Find your community among millions of users, unleash your creativity, and **have some fun again.**

Log In or Sign Up





Home

Search

Notifications

Chat

Feeds

Lists

Profile

Settings

New Post

Daily Following Popular With Friends Discover Mutuals Latest From



AT Protocol Fan Account @atprotocol.dev · 57m

#atproto at @fosdem.bsky.social #FOSDEM

There's a BOF room on Saturday as well. Thanks Dietrich @burrito.space



dietrich @burrito.space · 7h

Lovely night of chatting about @atproto.com with all stripes at #FOSDEM.

the tables were filled with 20+ folks from the Dweb, Mozilla, Solid and more

thanks to Zer0 who brought his DIY programmable bum bag and hung it up as a room-scale discovery mechanism



Search

Daily

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Mutuals

Latest From Follows

Latest From Mutuals

Quiet Posters

Catch Up

News

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More feeds

Feedback • Privacy • Terms • Help

BUT IT JUST LOOKS LIKE TWITTER

Daily Following Popular With Friends Discover Mutuals Latest From

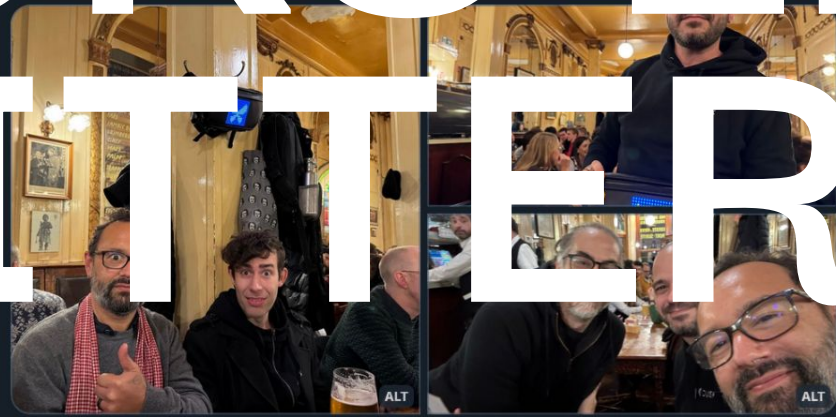
- Search
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- Latest From Mutuals
- Quick Start
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- News
- Des/Viz/III/Gen
- More feeds

Protocol F... un... dev · 57m
#atproto at @fosdem.bsky.social #FOSDEM

There's a BOF room on Saturday as well. Thanks Dietrich @diertrich.space

diertrich · .space ·
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The table were filled with folks from the Dweb, Mozilla, Solid
...
... brought his DIY programmable bag and
... as a room scale discovery mechanism



New



Bluesky
@bsky.app

this is how it feels to reach 30 MILLION users!



January 29, 2025 at 5:21 AM Everybody can reply

15.8K reposts **1.7K** quotes **207.7K** likes



Jay
@jay.bsky.team

Getting real close to a billion posts

999.86M
Total Posts

February 1, 2025 at 6:06 AM Everybody can reply

534 reposts **115** quotes **6.3K** likes

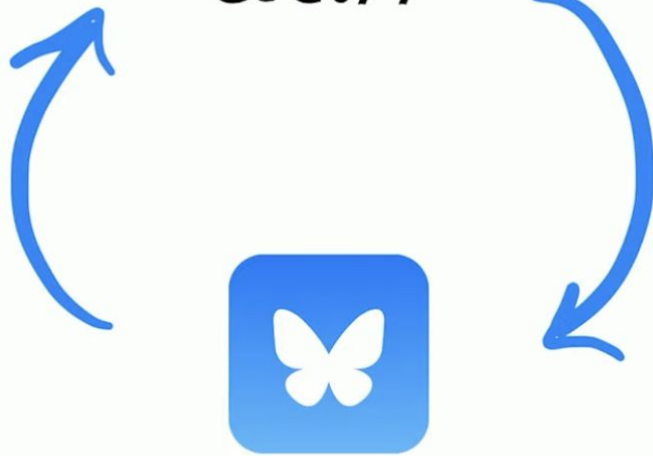
284

649

6.3K



at://



powered by

{callstack}

Used for
{ck



Dan Abramov
Bluesky

WEB WITHOUT WALLS



0:04 / 40:20



HD



? WHAT PROTO

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Data Repositories

Schemas & Lexicon

PDS Self-Hosting

Welcome to the Atmosphere

The AT Protocol is an open, decentralized network for building social applications.

[Quickstart →](#)

[Explore SDKs](#)

Guides

Quickstart

Create an application and start building.

[Read more →](#)

Glossary

Self-host

Learn how to set up your own personal data server.

[Read more →](#)

FAQ

AT Protocol

4 languages

Article Talk

Read Edit View history Tools

From Wikipedia, the free encyclopedia

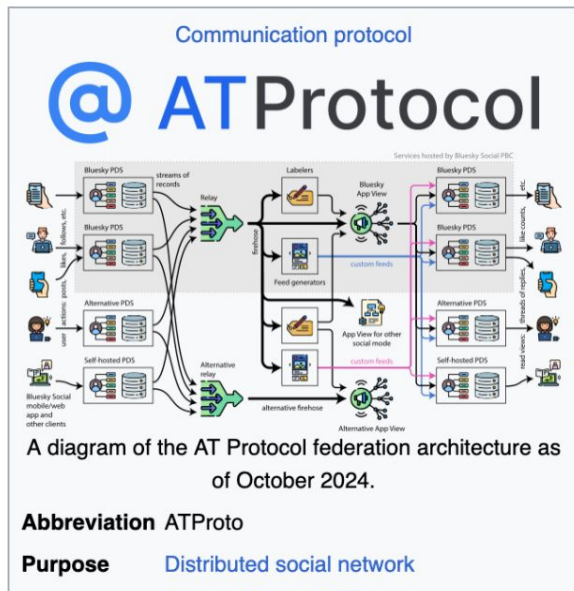
For modem commands, see *Hayes AT command set*.

The **AT Protocol** (**Authenticated Transfer Protocol**, commonly shortened to **ATProto**)^{[1][2]} is a **protocol** and **open standard** for **distributed social networking services**.^[3] It is under development by **Bluesky Social PBC**, a public **benefit corporation** originally created as an independent research group within **Twitter** to investigate the possibility of decentralizing the service.^[4]

The AT Protocol aims to address perceived issues with other decentralized protocols, such as **user experience**, **platform interoperability**, **discoverability**, **network scalability**, and **portability of user data** and **social graphs**.^[3] It employs a modular **microservice** architecture and a **federated**, server-agnostic **user identity** to enable movement between protocol services, with the goal of providing an **integrated** online experience.^[5] Platforms can access and serve any user content within the network by **fetching** content formatted as predefined **data schemas** from federated network-wide **data streams**.^{[6][7]}

The AT Protocol powers the **Bluesky** social network, which was created as a **proof of concept** for the protocol, and is the main service in an ecosystem of platforms and services built on the AT Protocol referred to as the **ATmosphere**.^{[8][9][10]} Bluesky Social has pledged^[year needed] to transfer the protocol's development to a standards body such as the **Internet Engineering Task Force (IETF)** in the near future.^[11]

AT Protocol



☰ AT Protocol

Article [Talk](#)

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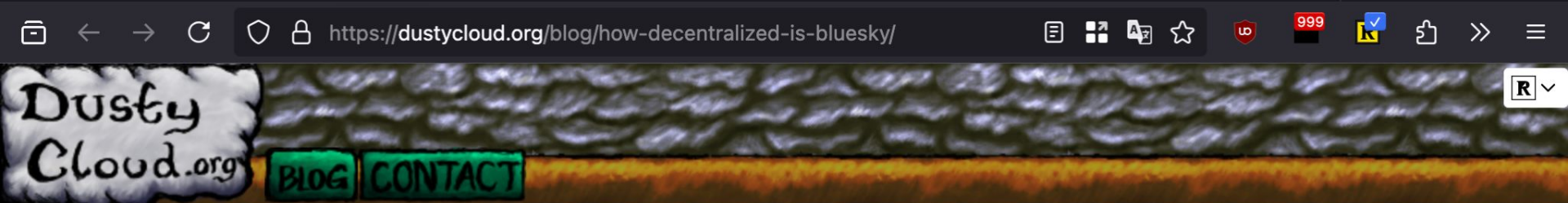
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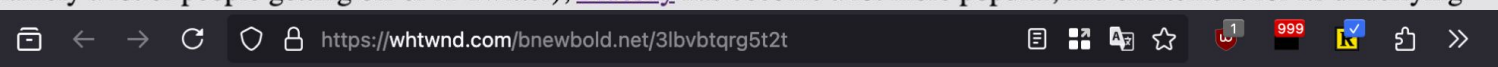
How decentralized is Bluesky really?

By Christine Lemmer-Webber on Fri 22 November 2024

Recently due to various events (namely a lot of people getting off of X-Twitter), [Bluesky](#) has become a lot more popular, and excitement for its underlying protocol, [ATProto](#), is growing. So in the present-day fediverse, I often get questions that are usually head-down focused on bluesky things except in private channels.

This debate has been growing here [about decentralization until they](#) about ATProto and arguing that other things aren't as productive, and so I figured it was time to talk to a core Bluesky developer that they have some thoughts.

Let us open with a framing. Decentralization is the center. "Federation", as has been the case with ActivityPub, though I would argue that it's not a

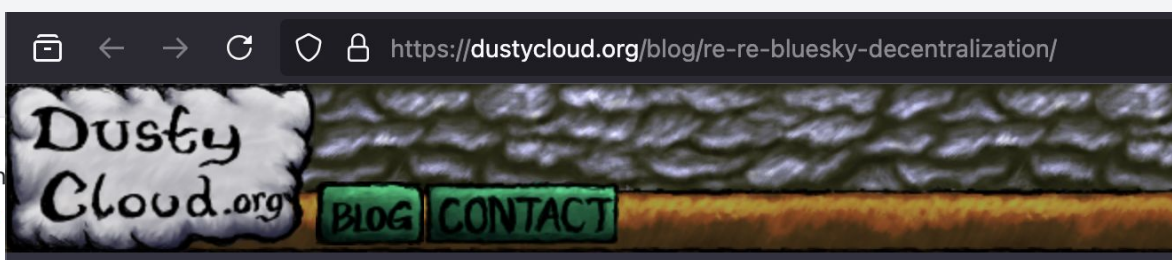


Reply on Bluesky and Decentralization

@bnewbold.net
11/27/2024, 3:50:54 AM

This is a reply to Christine Lemmer-Webber's [decentralized is Bluesky](#)

I am so *happy* and grateful to have you and them out in public. Her work has been so helpful and projects, and raises



Re: Re: Bluesky and Decentralization

By Christine Lemmer-Webber on Fri 13 December 2024

Lorem ipsum dolor sit amet, quo graecis expetenda reprehendunt et. Et has nulla intellegat. Ea vix equidem abhorreant deseruisse. Lorem ipsum dolor sit amet, quo graecis expetenda reprehendunt et. Et has nulla intellegat. Ea vix equidem abhorreant deseruisse.

ARCHI TECTURE

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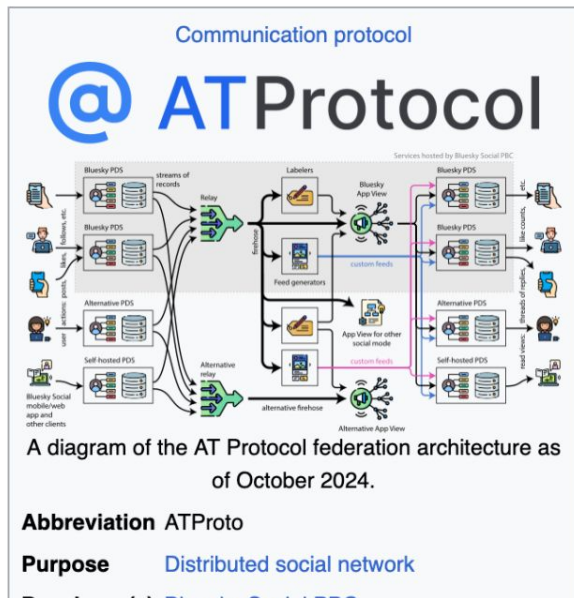
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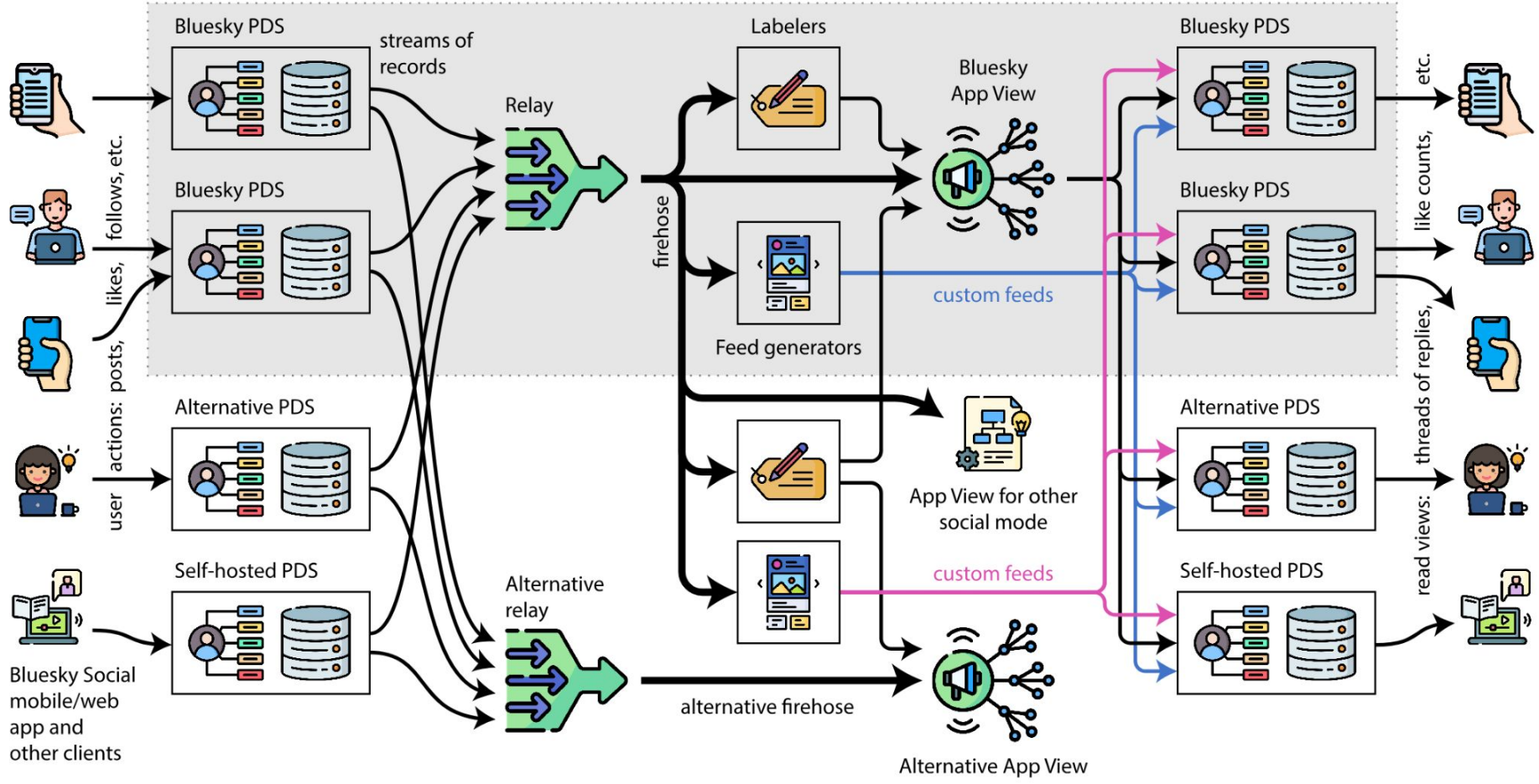
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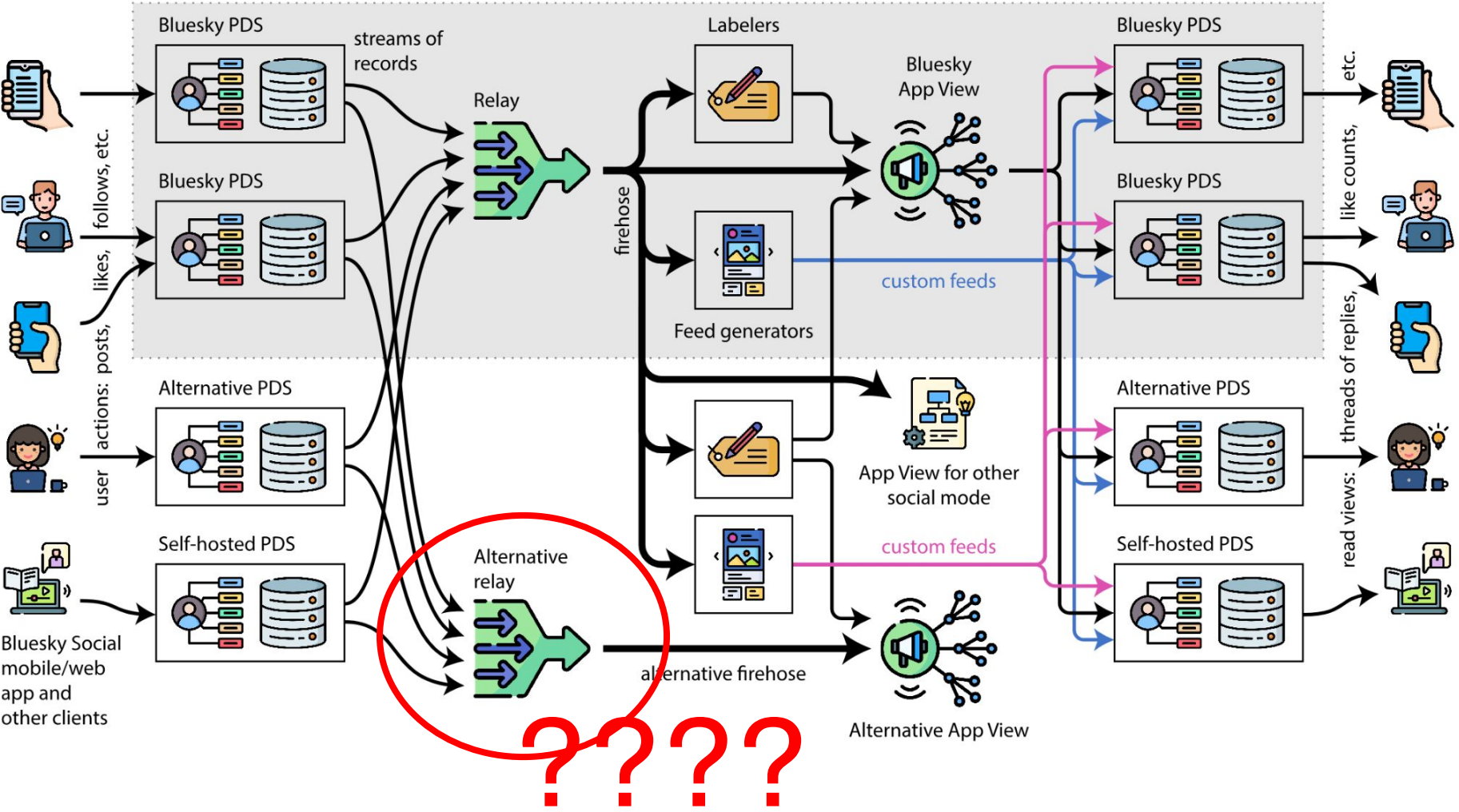
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AT Protocol







← Post



Paul Frazee
@pfrazee.com

Programmers! If you want to hear me get way into the weeds of how ATProto works, this is the podcast for you!



Jeremy Jung @jeremyjung.com · 16d

Hi bluesky! If you're curious about the technical details of how this place works I think you'll enjoy my chat with @pfrazee.com!

www.softwaresessions.com/episodes/atp...

Paul Frazee on Bluesky and ATProto

Building a decentralized social network

www.softwaresessions.com

HOWTO

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Building apps

- Quick start

Guides

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- Identity
- Data Repositories
- Schemas & Lexicon
- PDS Self-Hosting

Quick start guide to building applications on AT Protocol

🔗 Find the source code for the example application on GitHub.

In this guide, we're going to build a simple multi-user app that publishes your current "status" as an emoji. Our application will look like this:



statusphere-example-app Public

Watch 7 Fork 43 Star 173

main 7 Branches 0 Tags Go to file + Code

Table of commit history with columns for author, commit message, hash, and date. Includes entries for .vscode, lexicons, src, .env.template, .gitignore, .nvmrc, and LICENSE.

About

An example atproto application using ExpressJS and Typescript.

- Readme
MIT license
Activity
Custom properties

173 stars
7 watching
43 forks

Report repository

Releases



https://atproto-browser.vercel.app

Enter an AT uri:

eg. [at://did:plc:2xau7wbgdq4phuou2ypwuen7/app.bsky.feed.like/3kyutnrmg3s2r](https://atproto-browser.vercel.app/?uri=at%3A%2Fdid%3Aplc%3A2xau7wbgdq4phuou2ypwuen7%2Fapp.bsky.feed.like%2F3kyutnrmg3s2r)

Developed by [@tom.frontpage.team](#). [Source code](#)

Add "pdsls.dev" as an application for web+at links?

Add application



PDSLs



PDS URL or AT URI

Go

Browse the public data on [AT Protocol](#).

You can optionally login to manage the records in your repository.

Search inputs allowed:

PDS URL:

<https://pds.bsky.mom>

AT URI (at:// optional, DID or handle alone also works):

<at://did:plc:oisofpd7lj26yvgiivf3lxsi/app.bsky.feed.post/3l2zpbbhuvw2h>

Bluesky Link (posts and profiles):

<https://bsky.app/profile/mary.my.id/post/3kenlltlvus2u>

Self-hosting PDS

Self-hosting a Bluesky PDS means running your own Personal Data Server that is capable of federating with the wider Bluesky social network.

Preparation for self-hosting PDS

Launch a server on any cloud provider, [Digital Ocean](#) and [Vultr](#) are two popular choices

Ensure that you can ssh to your server and have root access

Server Requirements

- Public IPv4 address
- Public DNS name
- Public inbound internet access permitted on port 80/tcp

Server Recommendations

Operating System	Ubuntu 22.04
Memory (RAM)	1 GB
CPU Cores	1
Storage	20 GB SSD
Architectures	amd64, arm64
Number of users	1-20

TOOLS

Lorem ipsum dolor sit amet, quo graecis expetenda reprehendunt et. Et has nulla intellegat. Ea vix equidem abhorreant deseruisse. Lorem ipsum dolor sit amet, quo graecis expetenda reprehendunt et. Et has nulla intellegat. Ea vix equidem abhorreant deseruisse.

labelers

feed generators

self-hosting infra and related

other tools, services, platforms

EXAMP
GAL

LE

RY



WhiteWind

@whtwnd.com

1.5K followers 1 following 47 posts

WhiteWind is a Markdown blog service (AppView) which uses atproto.
whtwnd.com/about

Usage:

whtwnd.com/knksm5.final...

Repo:

github.com/whtwnd/white...



Followed by Mike Masnick, Jay 🦋, and 59 others

✓ Following



Posts

Replies

Media

Videos

🔄 Reposted by WhiteWind

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Latest From Following

Latest From Mutuals

Quiet Posters

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Smoke Signal

Find events, make connections, and create community.

The [Quick Start Guide](#) has a step-by-step guide to getting started!

Upcoming

Recently Created

AgreeableFM Presents 24-Hour Tired People 🌐

February 1 • 9pm - 11pm CST @asperasbompar.bsky.social ★ 0 👁 1 🚫 0

This is a totally fake event created as proof of concept.

thirdspace: 333 open decks [washington, dc] 👥

February 2 • 6pm - 10pm EST @znl.fyi ★ 0 👁 0 🚫 0

hey, it's znl! at the end of each thirdspace party, we trade off every 3 tracks. i got this idea from a night at phlote in baltimore, and four hour ...



Zicklag

@zicklag.katharos.group



Changed Handle

Me and @zeu.dev are working on #roomy with a grant from @skyseed.fund.

Now we have minimal synchronization for direct messages!

All data is synced locally and with your PDS. It currently uses inefficient polling, but all communication is between your browser and your PDS's with no central service!

The screenshot shows a 'Direct Messages' interface. On the left is a sidebar with a profile icon and three message preview cards. The main area is titled 'Direct Messages' and contains a '+ Create DM' button and a list of messages:

- Message 1: From nandi.weird.one (blue profile picture), timestamp 1/30/2025, 9:06:52 PM. Content: 'Hello!'
- Message 2: From nandi.weird.one (blue profile picture), timestamp 1/30/2025, 9:09:37 PM. Content: 'i see you'
- Message 3: From zicklag-test.bsky.social (yellow profile picture), timestamp 1/30/2025, 9:09:54 PM. Content: '🙄 No way!!'
- Message 4: From nandi.weird.one (blue profile picture), timestamp 1/30/2025, 9:10:25 PM. Content: 'we have sync'

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Streamplace

@stream.place

103 followers 2 following 6 posts

Solving video for everybody forever. Starting with live video on the AT Protocol.



Followed by Laurens, Boris, and 6 others

+ Follow



Posts

Replies

Media

Videos

↻ Reposted by Streamplace



Laurens @laurenhof.online · 17h

New: Last Week in the ATmosphere

Lots of experimentation going on in the ATProto dev community, some

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brendan

@schlage.town

New landing page on what we're building for Bluesky!

TL;DR — a tool for social docs; longform on atproto — think Medium or Google Docs, but where comments = Bluesky posts

Coming soon to [@leaflet.pub](https://leaflet.pub)...want to be the first to try? Publish docs/essays/more & start conversations?

✨ ⬇️ SIGN UP HERE ⬇️ ✨



Q Search

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Latest Fron

Latest Fron

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More feeds



bryan newbold

@bnewbold.net

nice, an independent image/blob service for atproto (eg, for building a CDN)

fwiw, bluesky builds on imgproxy (which is open source), and any of these components could be combined with cheap CDN services like fastly or cloudflare for small indie projects



PinkSea @pinksea.art · 4d

PinkSea is now running on top of a custom ATProto image proxy! we've ditched cdn.bsky.app to be more reliant on only ourselves and introduced [github.com/shinolabs/ha...](https://github.com/shinolabs/harbor) instead

please try out the site and let me know how it feels :)

shinolabs/harbor

Harbor is where the ships come to rest at the pink sea.



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FLOCK
TOGETHER
TIME

@PROTO @FOSDEM