

Smoke Signal

Events, RSVPs, and data ownership

<https://smokesignal.events/>

Nick Gerakines @ngarakines.me <nick.gerakines@gmail.com>; Thursday, September 5th, 2024

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he/him

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technology enthusiast in
Dayton, Ohio, USA.

<https://ngerakines.me/>



The name "Smoke Signal" borrows from language and concepts that originate from indigenous people.

This web application was developed by people that live in southern Ohio in the United States of America, specifically in the traditional homelands of the Myaamia and Shawnee people. Those people were forceably removed from their homeland. Colonialism is still an ongoing process that directly and indirectly affects all of us.

Without acknowledging the past, we cannot hope to make a better future where people are treated with the respect and dignity that they deserve.

<https://docs.smokesignal.events/docs/about/acknowledgement/>

All opinions expressed are my own. Smoke Signal is a passion project and is not endorsed or supported by employers past or present.

What Is Smoke Signal?

The TL;DR

- Create and manage events and event RSVPs
- Goals:
 - Be a "social utility" that helps people connect
 - Provide a stable lexicon
 - Own as little data as possible
 - Architect for global distribution but design for hyper-local usage
- Rust + SQLite + HTML + Docker + Caddy



Smoke Signal

Find events, make connections, and create community.

at://did:plc:tgudj2fjm77pzkuawquqhsxm/events.smokesignal.calendar.event/3kxbvxj7blk2t

Go

Use this to jump to and search for users and events. Try `at://did:plc:tgudj2fjm77pzkuawquqhsxm/events.smokesignal.calendar.event/3kxbvxj7blk2t` and `@smokesignal.events` More at [Search Help](#).

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

[Upcoming](#) Recently Created

ATProtocol Dev Talks: Smoke Signal Events 🌐

September 5 • 12:00pm - 1:15pm EDT [@atprotocol.dev](#) ★ 13 👁 1 🔒 0

Smoke Signal is an Events & RSVP system built on top of ATProtocol <https://smokesignal.events/Developer> Nick Gerakines <https://bsky.app/profile/ngerakines.me> has an extensive background in ...

Fantasy Weekend 👥

September 8 • 10:30am - 3:00pm EDT [@ngerakines.me](#) ★ 1 👁 0 🔒 0

Let's all go to the Ohio Renaissance Festival on the Sunday of the Fantasy weekend. The plan is to meet up inside the courtyard just past the entrance between 10:30 and 11:00.

FediForum (Day 1) 🌐

September 12 • 11am - 4pm EDT [@bnewbold.net](#) ★ 0 👁 1 🔒 0

An unconference for Fediverse folks: ActivityPub, Mastodon, etc. Three half-days (Thursday, Friday, Saturday) relatively low-cost registration. <https://fediforum.org/>

ATProtocol Dev Tech Talk: From Feeds to Labelers with Ændra Rininsland 👥

September 12 • 9:00am - 10:15am PDT [@atprotocol.dev](#) ★ 5 👁 0 🔒 0

Ændra Rininsland is joining us to talk about her work on Bluesky and AT Protocol, including running Bluesky's largest News feed and implementing the XBlock Screenshot Labeler.We'll have time for ...

September Community Day (Oakwood, OH) 👥

September 14 • 2pm - 5pm EDT [@dayton-pokemon.club](#) ★ 0 👁 0 🔒 1

Getting together on Saturday, September 14th for the September Community Day. Event will be updated as information becomes available. From <https://pokemongolive.com/post/cd-savethedate-s16?hl=en>



ATProtocol Dev Talks: Smoke Signal Events

September 5 • 9:00am - 10:15am PDT  [@atprotocol.dev](#)

 [Add To Calendar](#)

[Register on Luma](#)

[Log in](#) to RSVP to this event.

Smoke Signal is an Events & RSVP system built on top of ATProtocol <https://smokesignal.events/>

Developer Nick Gerakines <https://bsky.app/profile/ngerakines.me> has an extensive background in social platforms:

> I started Smoke Signal because users should have ownership and control of the content that they create. Having built sites like del.icio.us at Yahoo in the Social Search group and contributed to early web 2.0 sites like upcoming.org and Flickr, I firmly believe that there is sustainable demand for online services that are both functional and not harmful.

Nick has written some great blog posts on this:
* <https://docs.smokesignal.events/blog/why-atprotocol/>
* <https://docs.smokesignal.events/blog/for-communities/>

We'll have time for live Q&A and discussion.

[Going \(13\)](#) [Interested \(1\)](#) [Not Going \(0\)](#)

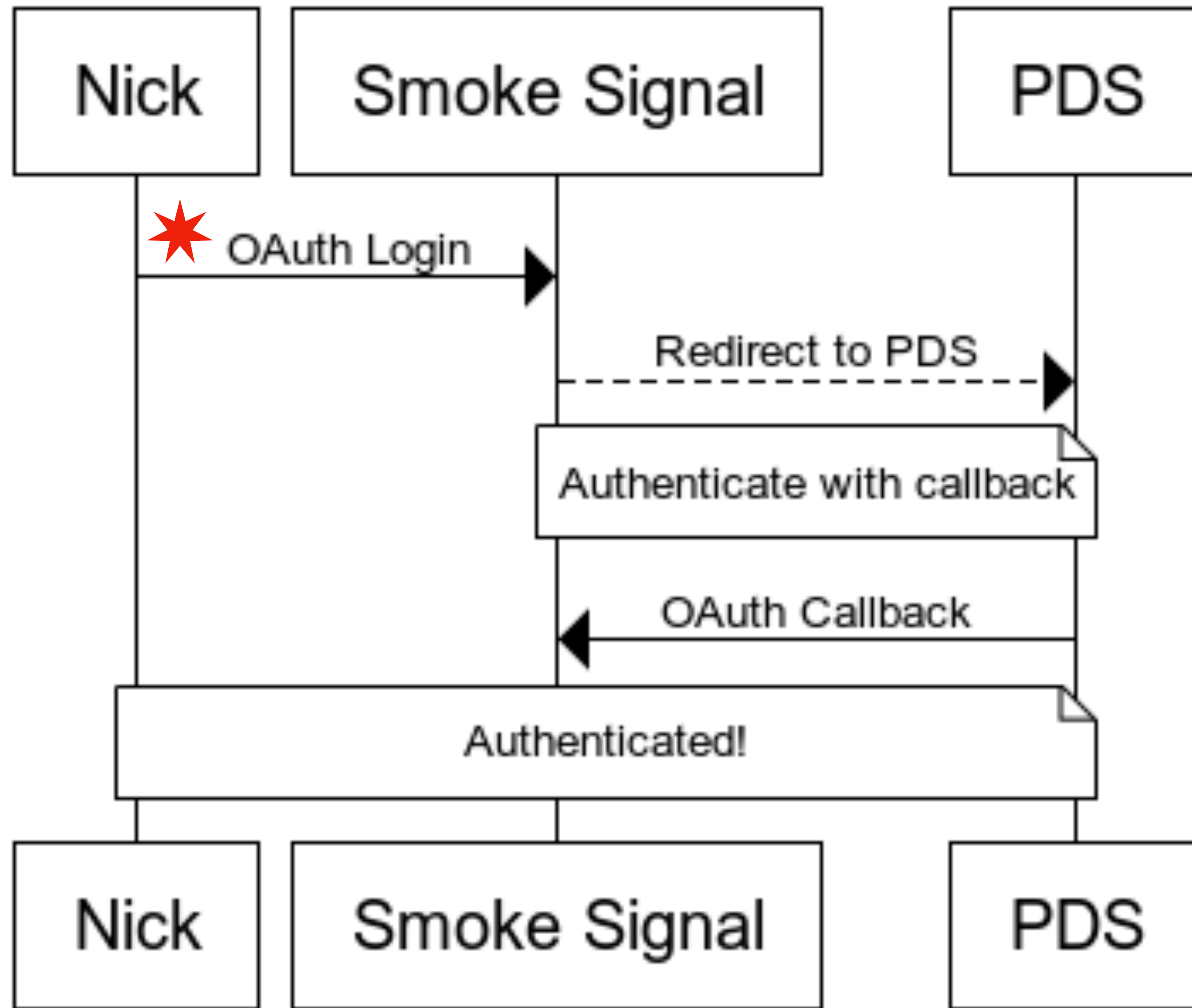
- [@laurenhof.online](#)
- [@psingletary.me](#)
- [@esb.lol](#)
- [@mikestaub.social](#)
- [@drewmca.dev](#)

[Previous](#)

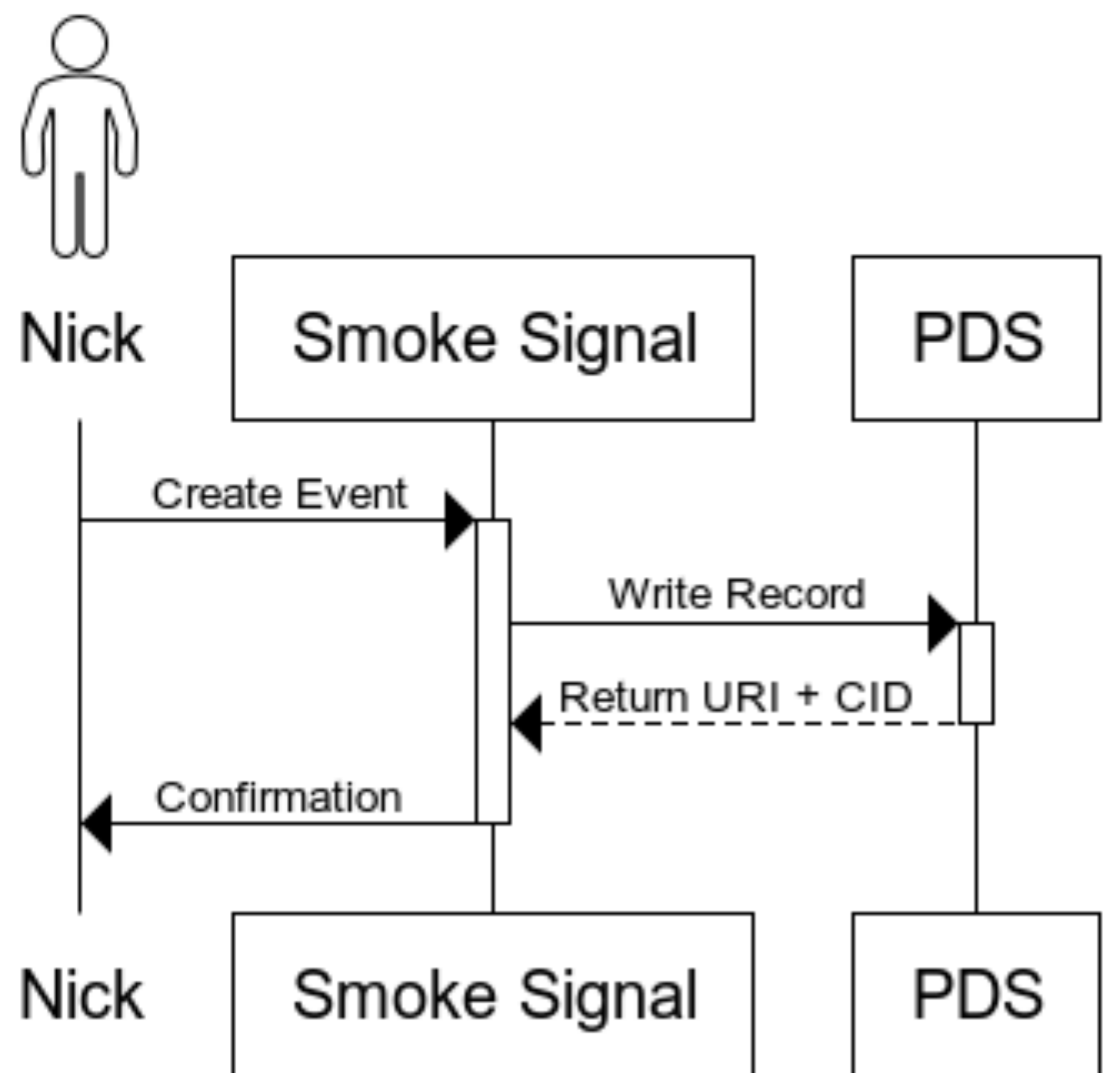
[Next](#)

Keeping It Simple

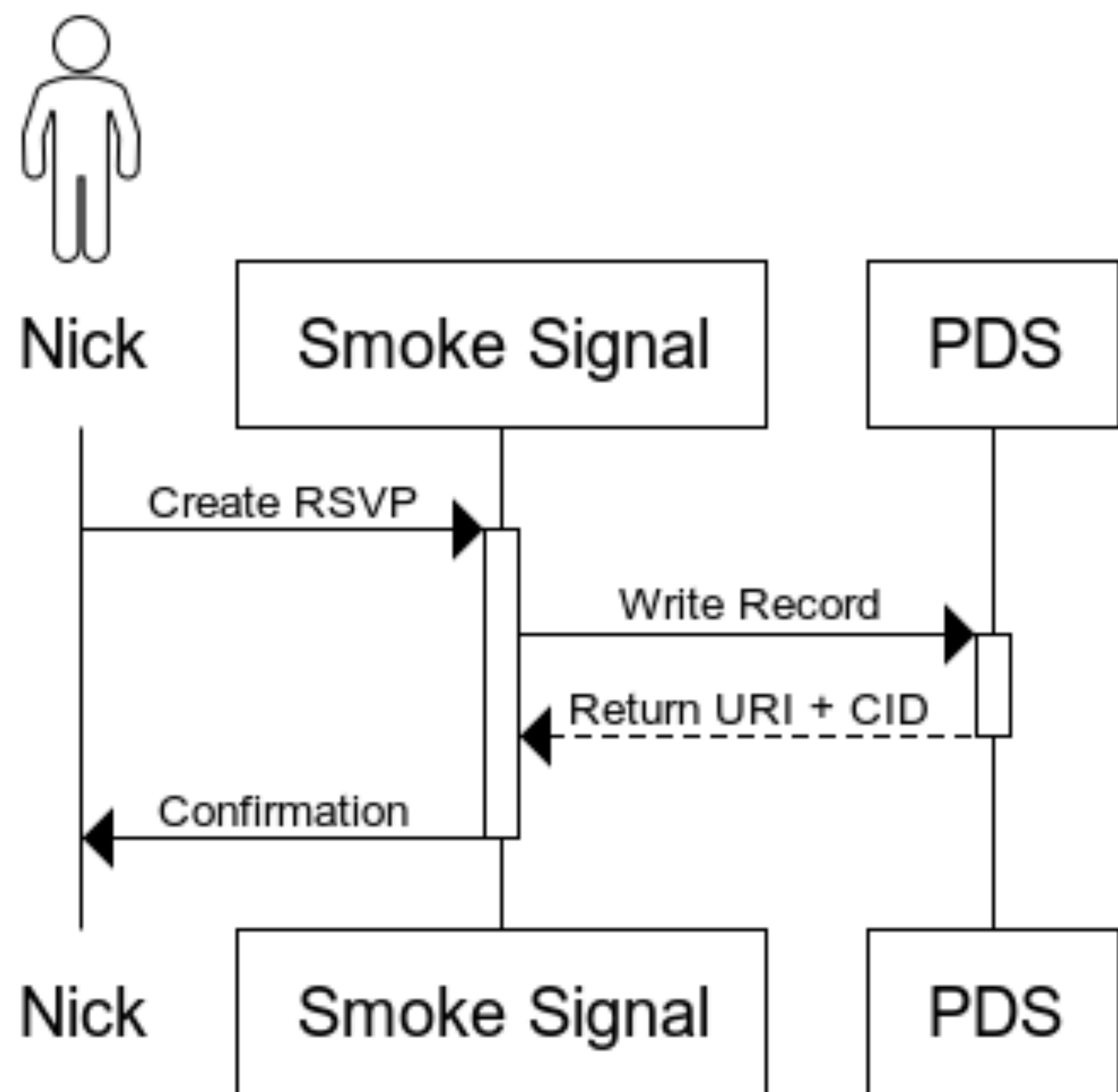
OAuth!



Record Management



www.websequencediagrams.com



www.websequencediagrams.com

Minimal Platform Dependencies

Smoke Signal requires PLC and PDS services.


```
{
  "uri": "at://did:plc:cbk jy5n7bk3ax2wplmtjofq2/events.smokesignal.calendar.event/3kyojwnb2oc2t",
  "cid": "bafyreiekimmdf2jrx5cpunstwvayuocihcqftif5r7zdhfff2lfwdujeau",
  "value": {
    "mode": "events.smokesignal.calendar.event#virtual",
    "name": "Zero Cool Day",
    "text": "HACK THE PLANET\r\n\r\n\"Zero Cool? Crashed fifteen hundred and seven systems in one  
gest crash in history, front page, New York Times, August 10th, 1988. I thought you was black, man!  
, this is Zero Cool!\"\r\n\r\nCelebrate Zero Cool Day by posting your favorite Hackers memes and wa  
ackers.",
    "$type": "events.smokesignal.calendar.event",
    "endsAt": "2024-08-11T00:00:00.000Z",
    "status": "events.smokesignal.calendar.event#scheduled",
    "startsAt": "2024-08-10T17:00:00.000Z",
    "createdAt": "2024-08-01T19:11:08.188Z"
  }
},
```

```
{
  "uri": "at://did:plc:cbk jy5n7bk3ax2wplmtjofq2/events.smokesignal.calendar.rsvp/3kzed7gboys2o",
  "cid": "bafyreia6s2o6on4hnm3nqn syhctmqem7uoau6sqdjotam6you6xjkyd5ym",
  "value": {
    "$type": "events.smokesignal.calendar.rsvp",
    "status": "events.smokesignal.calendar.rsvp#going",
    "subject": {
      "cid": "bafyreiekimmdf2jrx5cpunstwvayuocihcqftif5r7zdhfff2lfwdujeau",
      "uri": "at://did:plc:cbk jy5n7bk3ax2wplmtjofq2/events.smokesignal.calendar.event/3kyojwnb2oc2t"
    }
  }
},
-
```


Taking A Step Back

Smoke Signal Is The Answer To A Question

**How can communities outlive
the platforms they use?**

Decentralization

Data Portability

Lexicons

Why ATProtocol?

<https://docs.smokesignal.events/blog/why-atprotocol/>

Discovery

Data Ownership

Migration

New Content Types

Change Log

Moving Fast and Breaking Things

- 60+ releases
- Public with 0.1.1 on July 14th
- 32 Updates in July
 - Calendars
 - Lexicon Reset
- 32 Updates in August
 - OAuth
 - Badge PoC
- 18,000 lines of Rust
- 2,700 lines of HTML
- 400 lines of Markdown
- 148,116 ++ 14,769 --

Roadmap

(Still) Moving Fast and Breaking Things

- Internationalization and Localization
- Labeler integration
- Lexicon integration in clients
- Multi-Region deployments
- Recurring events and scheduling
- Research:
 - Proofs
 - Feeds

Half-Baked Ideas

Who knows where any of this will go?

- Event Spans (think conference + distinct schedule events)
- Ticketing
- Automation
- Waitlists
- Delegation and multi-organizer features
- Media
- Notifications
- Application metrics and observability
- Event analytics

Research: Record Proofs

**How can @handles attest to the
authenticity of records they don't own?**

Blue Badge

An Experiment in Record Proofs

<https://badge.blue/>

Blue Badge



Define, Issue, and Verify Badges for ATProtocol Handles.

at://did:plc:cbkjy5n7bk3ax2wplmtjofq2/blue.badge.collection/3l2npthykb226

 Verify

Use this to verify a badge in an @handle repository. `at://did:plc:cbkjy5n7bk3ax2wplmtjofq2/blue.badge.collection/3l2npthykb226`

How Does This Work?

First, an issuer defines one or more `blue.badge.definition` records to be issued:

```
{
  "uri": "at://did:plc:puy52u7opoy3gvr7h7qdy76/blue.badge.definition/6XXzn32gbU",
  "cid": "bafyreifbq7wub6wfuntruagvaaivqsinxyc4mpbfagjka35v4wx7aeu3fe",
  "value": {
    "name": "Adventure Awaits!",
    "text": "You're in for an adventure! Log in for the first time to https://atproto.camp/",
    "$type": "blue.badge.definition"
  }
}
```

With the permission of a @handle (via OAuth), the issuer writes a `blue.badge.award` record to the @handle's repository. They can use the `blue.badge.collection` collection or their own.

The award record contains basic badge information as well as a cryptographic signature of the badge:

```
{
  "$type": "blue.badge.award",
  "badge": {
    "cid": "bafyreifbq7wub6wfuntruagvaaivqsinxyc4mpbfagjka35v4wx7aeu3fe",
    "description": "You\u0027re in for an adventure! Log in for the first time to https://atproto.camp/.",
    "name": "Adventure Awaits!"
  }
}
```


Blue Badge



Define, Issue, and Verify Badges for ATProtocol Handles.

at://did:plc:cbk jy5n7bk3ax2wplmtjofq2/blue.badge.collection/3l2npthykb226

 Verify

Use this to verify a badge in an @handle repository. `at://did:plc:cbk jy5n7bk3ax2wplmtjofq2/blue.badge.collection/3l2npthykb226`

Record is valid!

```
{
  "cid": "bafyreiaqx3k3asw2zg7fnvxz2bm4i7ju6xwq7svqkvkgskcclpeuqdzjny",
  "uri": "at://did:plc:cbk jy5n7bk3ax2wplmtjofq2/blue.badge.collection/3l2npthykb226",
  "value": {
    "$type": "blue.badge.award",
    "badge": {
      "cid": "bafyreifbq7wub6wfuntruagvaaivqsinxyc4mpbfagjka35v4wx7aeu3fe",
      "description": "You\u0027re in for an adventure! Log in for the first time to https://atproto.camp/.",
      "name": "Adventure Awaits!",
      "uri": "at://did:plc:puy52u7opoy3gvr7h7qdy76/blue.badge.definition/6XXzn32gbU"
    },
    "did": "did:plc:cbk jy5n7bk3ax2wplmtjofq2",
    "issued": "2024-08-26T22:14:02.000Z",
    "proof": {
      "k": "https://atproto.camp/.well-known/jwks.json#01J67HBM2CCKT98FE20SKPR5EA",
      "s": "2-EaPZELcvu5SL8lS863fta8moqLZcpKlrzFpn7RbUr_B37HZphJa642dJfGNM2BMZG1-YGQync-2pyhoPC4Wg=="
    }
  }
}
```

```
{
  "uri": "at://did:plc:puy52u7opoy3gvrv7h7qdy76/blue.badge.definition/6XXzn32gbU",
  "cid": "bafyreifbq7wub6wfuntruagvaaivqsinxyc4mpbfagjka35v4wx7aeu3fe",
  "value": {
    "name": "Adventure Awaits!",
    "text": "You're in for an adventure! Log in for the first time to https://atproto.camp/",
    "$type": "blue.badge.definition"
  }
},
```

```
{
  "$type": "blue.badge.award",
  "badge": {
    "cid": "bafyreifbq7wub6wfuntruagvaaivqsinxyc4mpbfagjka35v4wx7aeu3fe",
    "description": "You're in for an adventure! Log in for the first time to https://atproto.camp/. ",
    "name": "Adventure Awaits!",
    "uri": "at://did:plc:puy52u7opoy3gvrv7h7qdy76/blue.badge.definition/6XXzn32gbU"
  },
  "did": "did:plc:cbkgy5n7bk3ax2wplmtjofq2",
  "issued": "2024-08-26T22:14:02.000Z",
  "proof": {
    "k": "https://atproto.camp/.well-known/jwks.json#01J67HHM2CCKT98FE20SKPR5EA",
    "s": "2-EaPZELcvu5SL8lS863fta8moqLZcpKlrzFpn7RbUr_B37HZphJa642dJfGNM2BMZG1-YGQync-2pyhoPC4Wg=="
  }
}
```

What Does That Mean?

1. @atproto.camp defines the badge "Adventure Awaits".
2. @ngerakines.me earns the badge, so @atproto.camp awards it to them.
3. @atproto.camp writes a signed record to the @ngerakines.me PDS.
4. @ngerakines.me can show off their earned badge. Anyone who views the record or a representation of the record, can see the cryptographic proof that it is authentic.

Applied To Smoke Signal

1. @atproto.camp creates a public concert event with 10 seats.
2. @ngerakines.me RSVPs and pays for a seat.
3. @atproto.camp writes a signed record to the @ngerakines.me PDS showing their RSVP was accepted and they were marked as paid.
4. @ngerakines.me can show off that they went to the concert. Anyone who views the record or a representation of the record, can see the cryptographic proof that it is authentic.

So Many Possibilities!

So Many Details To Figure Out!

Verifiable Credentials Data Model v2.0

Expiration

Revocation

Delegation

Verification Methods

Blue Badge Is Open Source

<https://github.com/ngerakines/badgeblue>

For Discussion:

How can I provide a lexicon that is descriptive and authoritative?

Should lexicons be records with AT-URIs?

```
{
  "uri": "at://did:plc:tgudj2fjm77pzkuawquqhsxm/events.smokesignal.calendar.event/3kxbvxj7blk2t",
  "cid": "bafyreigdjtxqo5scfjd27eqqi7xiupisu23n6ih2rjdvlyyl6wo5pefoq",
  "value": {
    "$type": "events.smokesignal.calendar.event",
    "name": "One Year Anniversary",
    "text": "This is the one year anniversary of the launch of Smoke Signal!",
    "mode": "events.smokesignal.calendar.event#inperson",
    "status": "events.smokesignal.calendar.event#scheduled",
    "startsAt": "2024-08-12T11:00:00.000Z",
    "endsAt": "2024-08-12T12:00:00.000Z",
    "createdAt": "2024-08-09T20:46:37.979Z"
  }
},
```

```
{
  "uri": "at://did:plc:tgudj2fjm77pzkuawquqhsxm/events.smokesignal.calendar.event/3kxbvxj7blk2t",
  "cid": "bafyreigdjtxqo5scfjd27eqqi7xiupisu23n6ih2rjdvlyyl6wo5pefoq",
  "value": {
    "$type": "at://did:plc:tgudj2fjm77pzkuawquqhsxm/com.atproto.lexicon.definition/3l2npthykb226",
    "name": "One Year Anniversary",
    "text": "This is the one year anniversary of the launch of Smoke Signal!",
    "mode": "events.smokesignal.calendar.event#inperson",
    "status": "events.smokesignal.calendar.event#scheduled",
    "startsAt": "2024-08-12T11:00:00.000Z",
    "endsAt": "2024-08-12T12:00:00.000Z",
    "createdAt": "2024-08-09T20:46:37.979Z"
  }
},
```

```
{
  "uri": "at://did:plc:tgudj2fjm77pzkuawquqhsxm/com.atproto.lexicon.definition/3l2npthykb226",
  "cid": "d74b7371833cabb2ea82892cf00f4f5030188a131e1f428455d6c40400f74d0c",
  "value": {
    "$type": "com.atproto.lexicon.definition",
    "id": "events.smokesignal.calendar.event.main",
    "description": "A Smoke Signal Event",
    "key": "tid",
    "record": {
      "type": "object",
      "properties": {
        "name": {
          "type": "string"
        },
        "text": {
          "type": "string"
        },
        "createdAt": {
          "type": "string",
          "format": "datetime"
        }
      }
    }
  }
}
```


Can feeds display any record that conforms to a trait or interface?

What is the minimal amount of information needed to constitute a feed element? The "text" + "createdAt" attributes?

What is our shared taxonomy of content interactions?

Can "app.bsky.feed.like" and "app.bsky.feed.repost" apply to anything? Should they be phased out in favor of "com.atproto.interaction.stamp" and "com.atproto.interaction.share"?

```
{
  "$type": "com.atproto.interaction.stamp",
  "subject": {
    "uri": "at://did:plc:cbk jy5n7bk3ax2wplmtjofq2/events.smokesignal.calendar.event/3kzcycai wzk2o",
    "cid": "bafyreibzn47zxwmcm4pqr f2ar mt6jjlqsq3ddmgw7ssxjl4wcvjs5ebw7q"
  },
  "stamp": "com.atproto.interaction.stamp#like"
}
```

**How can relay subscribers consume events
and validate their authenticity?**

End Of Line