23 Branches 106 Tags Go to file Go to file Code

acco 💚 Bump timeout on flaky test ✓ 9d9c4af · 2 hours ago

.github/workflows	👷 Add `make release-gh` to …	last week
.vscode	🧹 Clean Svelte files, add ts…	2 months ago
assets	💄 Display 'Invite link' button…	2 hours ago
cli	📝 Add `sequin config` to C…	last week
config	⚡ Apply (configurable) back…	2 hours ago
deploy/aws-ecs	Add mintlify docs	5 months ago
docker	♻️ Update playground.yml f…	2 weeks ago
docs	⚡ Apply (configurable) back…	2 hours ago
examples	⚙️ Make load_consumer mo…	4 months ago
lib	⚡ Apply (configurable) back…	2 hours ago
priv	✨ Add `seq` to consumer me…	2 hours ago
rel	Alter Dockerfile to more clos…	3 months ago
scripts	👷 In release script, add del…	2 hours ago
spellcheck	Ignore dependencies in mak…	4 months ago
test	💚 Bump timeout on flaky test	2 hours ago
.formatter.exs	Add typed_struct to formatte…	last month
.gitignore	🤫 Add docker-local/	2 weeks ago
.iex.exs	💀 Remove HttpPullConsum…	2 weeks ago
.settings.example.json	Allow for running 'make depl…	3 months ago
.tool-versions	hoist up .tool-versions to roo…	5 months ago
Dockerfile	✨ /version for version info i…	last week
LICENSE	Create LICENSE	5 months ago
Makefile	👷 Add `make release-gh` to …	last week
README.md	Update sink timelines in RE…	2 days ago
STYLE.md	📝 Start of docs refactor	2 weeks ago
docker-compose.yaml	⚡ Performance improvements	last month
gen-readme.md	Add SDK links to README	5 months ago

About

Postgres CDC to streams and queues like Kafka, SQS, HTTP endpoints, and more

sequinstream.com

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Release v0.6.19 Latest
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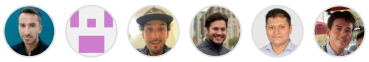
Packages

No packages published

Contributors 6



Languages

Elixir 69.7% **Svelte** 19.4%
Go 6.5% **Shell** 1.4%
TypeScript 1.1%
JavaScript 0.7% **Other** 1.2%

mix.exs	✨ Add Google PubSub mod…	last week
mix.lock	✨ Add Google PubSub mod…	last week
postgres-replication.md	Flatten project	4 months ago

README MIT license

Sequin

Postgres CDC to streams and queues like Kafka, SQS, HTTP endpoints, and more

Sequinstream.com · Documentation · Website · Discord

What is Sequin?

Sequin is a tool for change data capture (CDC) in Postgres. Sequin makes it easy to stream Postgres rows and changes to streaming platforms and queues (e.g. Kafka and SQS). You can backfill existing rows and stream new changes in real-time.

Sequin even supports native sinks (HTTP GET and webhooks), so you can get started without any other infrastructure.

CDC enables applications and services to track and respond to row-level changes in database tables as they occur. With CDC via Sequin, you can:

1. **Replicate data** from your existing tables to other apps, databases, caches, materialized views, or frontend clients.
2. **Build event driven workflows** such as triggering side effects when data in Postgres changes.

Sequin itself is built on Postgres. It uses a logical replication slot to detect changes and internal tables to store sink state.

Unlike Debezium, another CDC tool, Sequin doesn't require Kafka or Zookeeper to operate. Sequin is a standalone Docker container that you can deploy next to your Postgres database. Or, you can use our hosted offering.

Sequin is open source/MIT. To help us make this project great, tell us what you're building in our Discord Server.

Sinks

Sink	Support	Description
Kafka	✅ Real-time streaming ✅ Backfill existing rows	
SQS	✅ Real-time streaming ✅ Backfill existing rows	
Redis	✅ Real-time streaming ✅ Backfill existing rows	`XADD` to Redis Streams
Webhook Subscription (Native)	✅ Real-time streaming ✅ Backfill existing rows	Send changes to any HTTP endpoint
HTTP Pull (Native)	✅ Real-time streaming ✅ Backfill existing rows	Consume changes directly from Sequin with exactly-once processing
GCP Pub/Sub	✅ Real-time streaming ✅ Backfill existing rows	

Sink	Support	Description
Azure EventHubs	Coming soon	(Early Dec 2024)
NATS JetStream	Coming soon	(Dec 2024)
Amazon SNS	Coming soon	(Late Dec 2024)
AWS Kinesis	Coming soon	(Late Dec 2024)
RabbitMQ	Coming soon	(Jan 2025)

Killer features

- **Never miss a change:** Sequin ensures all database changes are delivered to sinks.
- **SQL-based routing:** Filter and route messages to sinks using SQL `where` conditions.
- **Backfills:** Backfill existing rows from your tables to sinks.
- **Bring your database:** Sequin is not an extension. It works with any Postgres database version 12+.
- **Transforms** (coming soon!): Transform message payloads by writing functions in Lua, JavaScript, or Go.

CDC use cases

Sequin works great for CDC use cases like:

- **Triggering a workflow when data changes in Postgres:** Execute custom business logic whenever specific rows are inserted, updated, or deleted in your database.
- **Making events available to downstream services:** Stream changes from your database tables as events that other services can consume.
- **Informing downstream services when rows change:** Notify dependent services about data changes to keep systems in sync.
- **Audit logging:** Track and record all changes made to data in your database for compliance or feature development.
- **Sync a table from one database to another:** Keep tables synchronized across different database instances in real-time.
- **Materializing another table in your database:** Create and maintain derived tables based on changes to source tables.
- **Maintaining a cache:** Keep caches up-to-date by streaming database changes.
- **Refreshing search indexes:** Keep search indexes fresh by streaming updates from your database.

Getting started

See our quickstart.

Alternatively, you can try Sequin for free on Sequin Cloud. Follow the instructions in the app to start streaming your data in a couple minutes.

How Sequin works

Sequin connects to any Postgres database. Specify the tables you want to stream, as well as optional filters and transformations. Route changes to sinks like Kafka, SQS, Redis, or HTTP endpoints.

When you setup a sink, you can opt to backfill data from the source table to the sink.

After setup, Sequin will stream new changes to the sink as they occur in real-time. If there are any issues with delivery, Sequin will automatically retry delivery with exponential backoff.

Sequin comes with a web console/UI for configuration.

You can also configure Sequin as code using YAML config files.

Benchmarks

Sequin efficiently captures changes using logical replication. Except at very extreme scale, logical replication adds little overhead to the performance of your database. If your database can handle the transaction, so can Sequin with minimal latency.

Postgres Performance is highly dependent on machine resources. But to give you an idea, a `db.m5.xlarge` RDS instance (4 vCPU, 16 GB RAM, $260/mo) can handle inserts at 5,000 messages/second, with bursts up to 10k messages/second.

How Sequin compares

▼ Sequin vs Debezium

Sequin vs Debezium

Debezium is also a CDC tool that captures changes from Postgres and streams them to messaging systems like Kafka. Debezium requires significant infrastructure (Kafka, Zookeeper, Connect) to operate.

Sequin provides the same CDC capabilities but with a much simpler setup:

1. **No Kafka required**: Sequin doesn't require Kafka or Zookeeper.
2. **Native destinations**: With Debezium, you route to destinations via Kafka Connect. With Sequin, you stream directly to your destination of choice. This means simpler setup, fewer transforms, and fewer moving parts.
3. **Full-featured web console**: Sequin includes a web console for configuration and monitoring.

▶ Sequin vs Fivetran/Airbyte

▶ Sequin vs custom CDC solutions

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