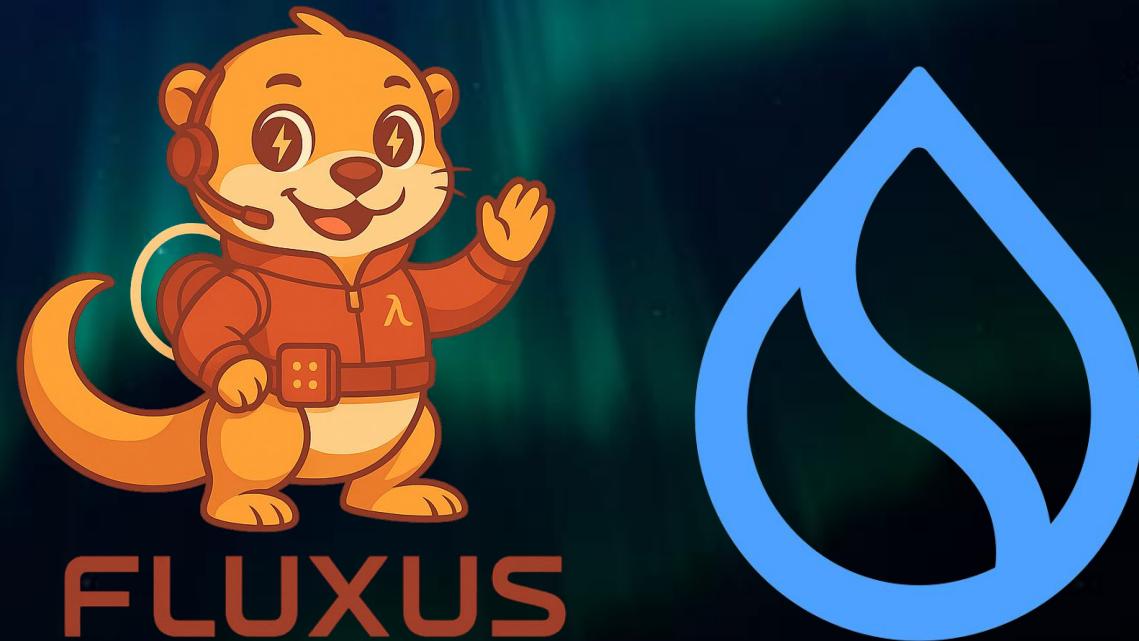




Fluxus for Sui Blockchain Logs

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01

Problem Statement

Challenge of Sui Log Analysis



Massive unstructured log data

Sui blockchain generates vast, unstructured log data from transactions, validators, and smart contracts.

Real-time insights needed

There is a critical need for real-time analysis to identify patterns, detect anomalies, and understand user behavior.

Challenge of Sui Log Analysis

Unique data model challenges

Traditional tools face latency and scalability issues when dealing with Sui's unique data model.





Traditional Tools Struggle

Latency issues

Traditional log analysis tools are often slow, unable to provide immediate insights into Sui blockchain activities.



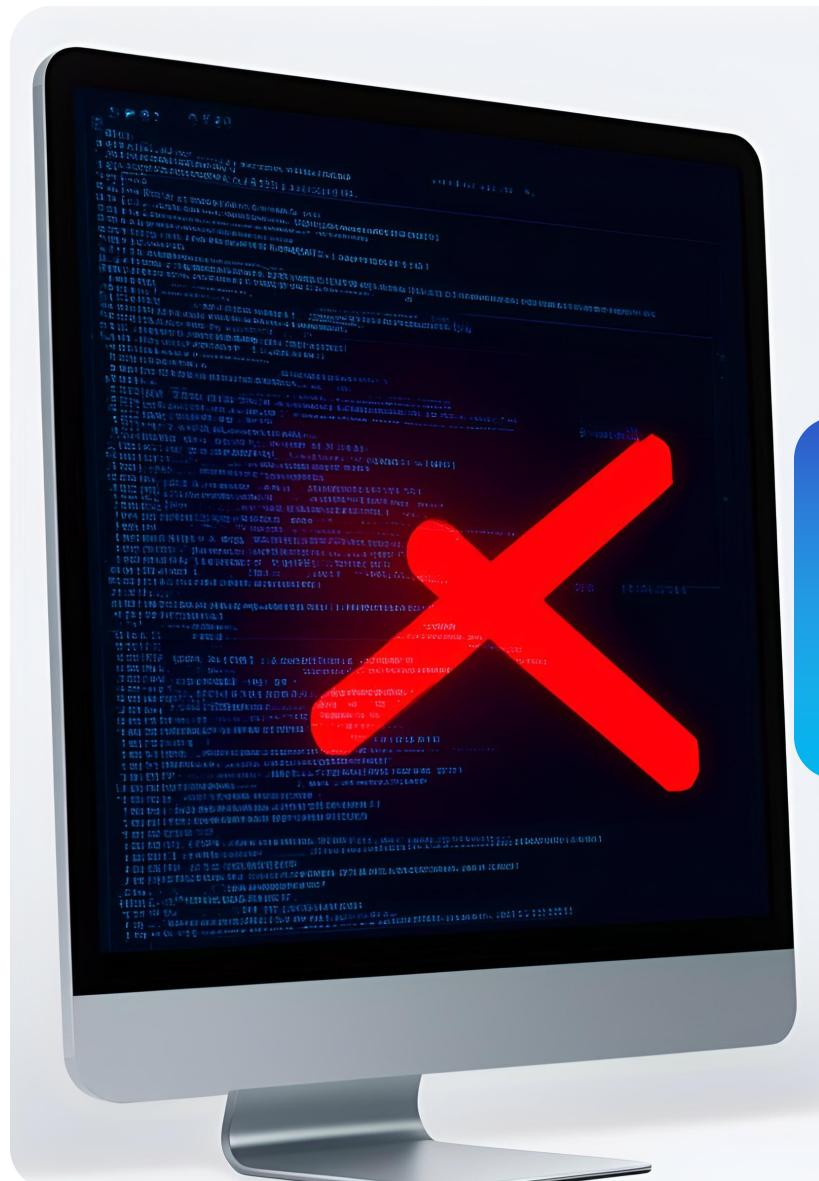
Scalability problems

These tools lack the scalability to handle the growing volume of Sui transactions and logs efficiently.

Traditional Tools Struggle

Incompatibility with Sui model

Sui's specific data model presents challenges for traditional log analysis tools, which are not designed to work with it.



02

Fluxus Overview

What is Fluxus



Rust–built for performance

High-performance, memory-safe, and parallel-ready stream processing tool.



Purpose–built for Sui

Designed to parse, transform, and aggregate Sui blockchain logs in real time.



Real–time analytics

Empowers real–time insights into patterns, anomalies, and user behavior on Sui.

Key Points of Fluxus

01

Modular architecture

Sources, Transforms, Sinks for flexible integration with Sui logs.

02

Real-time processing

Enables immediate analysis of Sui transactions, validators, and smart contracts.

03

Unique data model support

Addresses latency and scalability issues with Sui's unique data model.

Fluxus Architecture



Sources for data intake

Handles incoming Sui logs, preparing them for processing.



Transforms for processing

Applies real-time transformations to the log data.



Sinks for output

Routes processed data to various outputs like dashboards and databases.

03

Core Features for Sui

High-Performance

Process 10k+ Sui transactions per second

Fluxus can handle over ten thousand Sui transactions per second, ensuring real-time log analysis.





Flexible Windowing

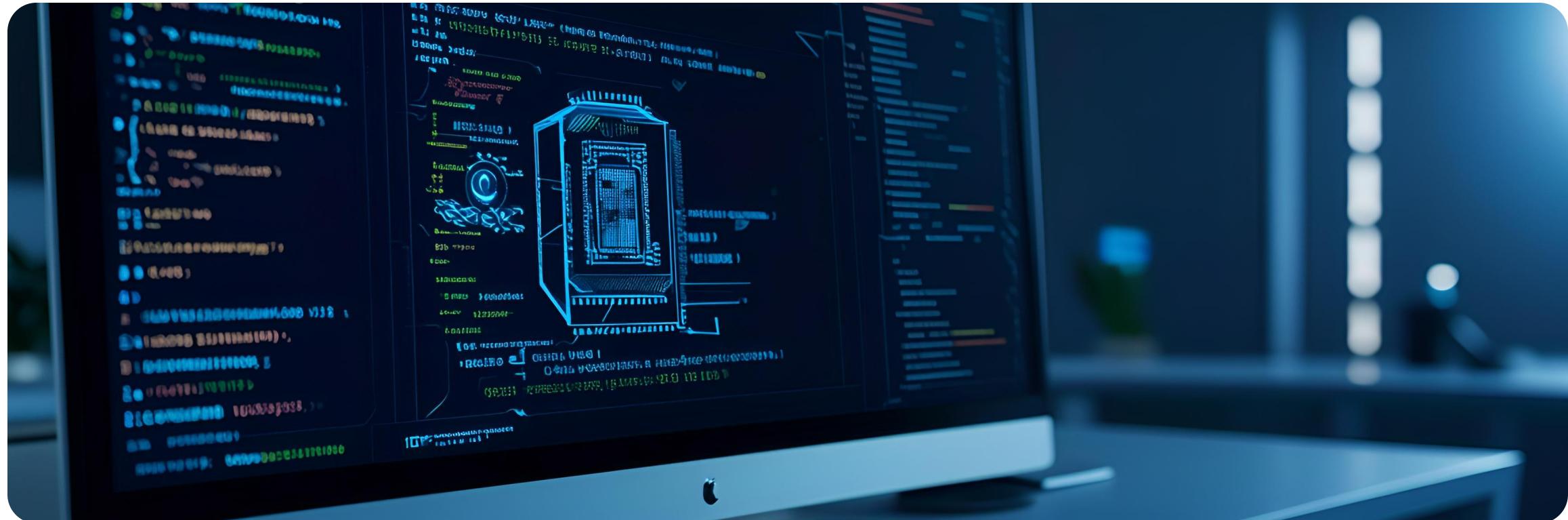
Tumbling windows for hourly transaction sums

Use Fluxus to aggregate transactions into hourly sums with tumbling windows, providing insights into transaction patterns.

Parallel Processing

Analyze validator logs across 8 cores in parallel

Fluxus allows for the simultaneous analysis of validator logs across multiple cores, enhancing processing speed and efficiency.



Type-Safe API



Safely handle Sui addresses and SUI amounts

The type-safe API in Fluxus ensures secure handling of Sui addresses and SUI amounts, preventing data corruption.

04

Demo & Use Cases



How Fluxus Works

01

Parsing Sui transaction logs

Fluxus processes raw Sui logs into structured JSON format for analysis.

02

Aggregating SUI transfers

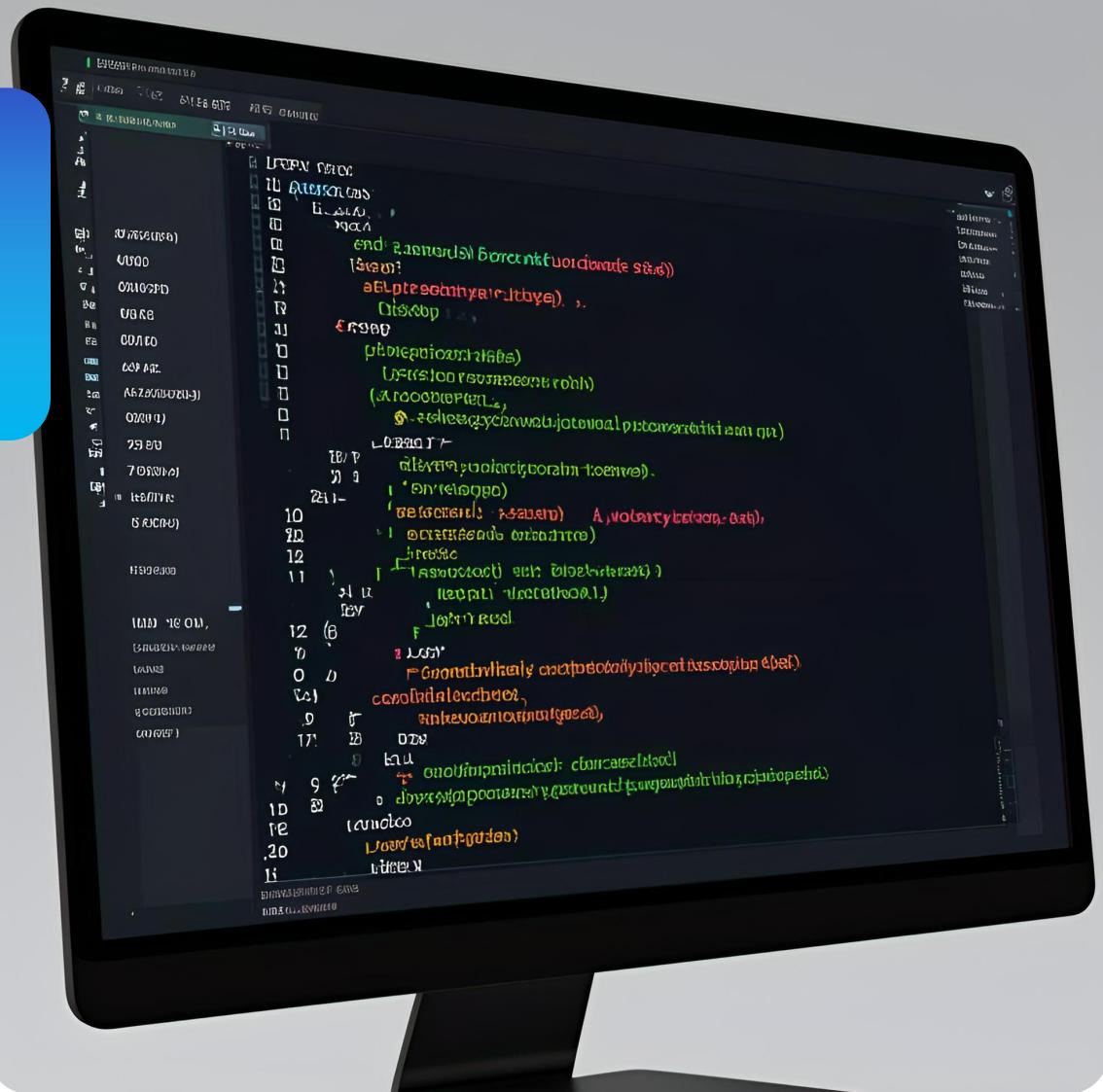
Uses tumbling windows to sum daily SUI transfers efficiently.

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Real-time filtering

Monitors and filters failed smart contract executions as they occur.

Demo Snippets



Transaction log parsing

Shows how Fluxus converts Sui transaction logs into JSON for processing.

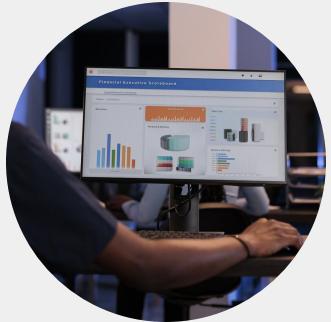
Daily transfer aggregation

Illustrates the use of Fluxus to aggregate SUI transfers on a daily basis.

Failed execution filtering

Demonstrates real-time detection of smart contract execution failures.

Visual Demonstration



Fluxus CLI processing

Short screen recording of Fluxus CLI in action, processing Sui logs.

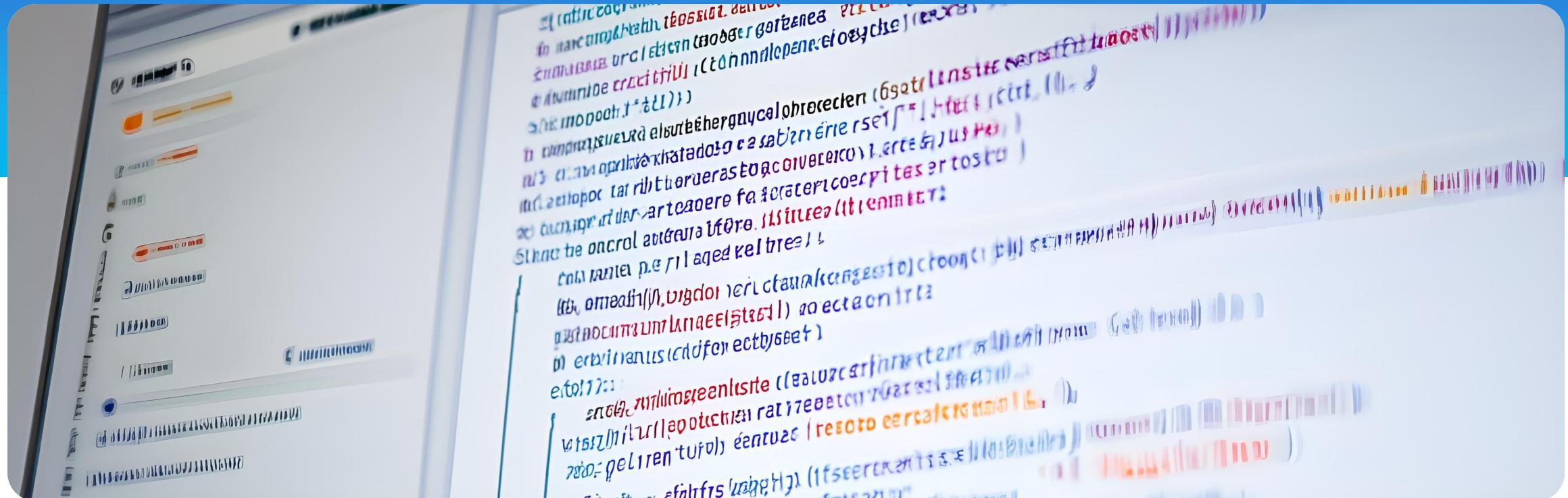


Grafana dashboard metrics

Live metrics displayed on a Grafana dashboard, showcasing Fluxus's capabilities.

05

Developer Experience

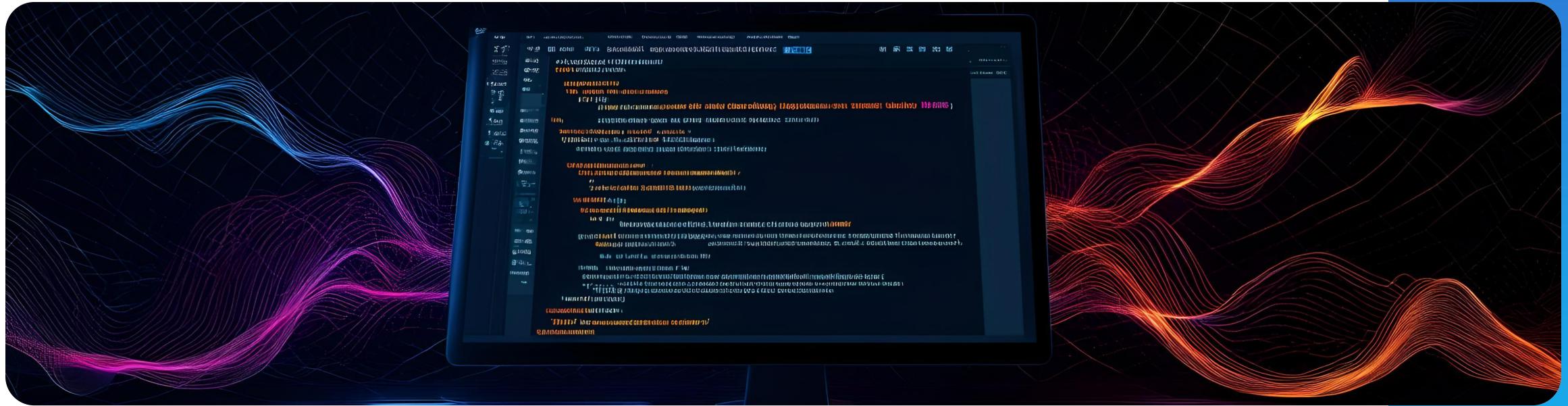


Rust API

Type-safe, documented, and easy to extend

Fluxus offers a Rust API that ensures type safety, comprehensive documentation, and straightforward extensibility for developers.

Ready-to-use Examples



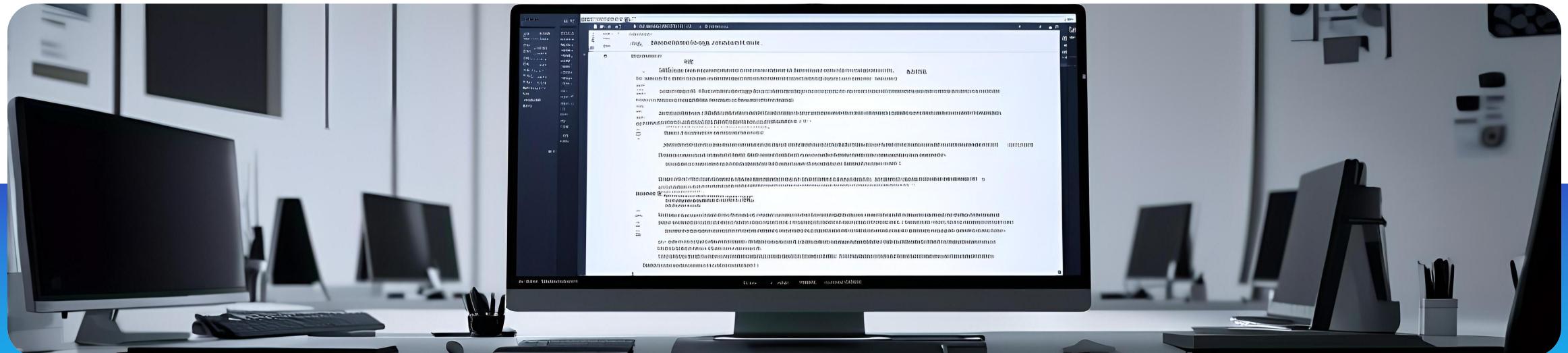
Scripts for various log analysis tasks

Fluxus provides ready-to-use scripts for common tasks like word count, temperature sensors, and specific Sui log analysis.

Open Source License

Apache 2.0 license

Fluxus is released under the Apache 2.0 license, allowing for free contribution and customization.



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Call to Action

Get Started Steps



Clone the Fluxus Repository

Start by cloning the Fluxus repository from GitHub using the command:
``git clone https://github.com/lispking/fluxus``



Build Fluxus

After cloning, build Fluxus by running the command: ``cargo build``



Run Sui Log Example

To see Fluxus in action, execute the Sui log example with: ``cargo run --example sui-log-analyzer``

THE END

Thanks