



Axual is a rich and ready-to-go distribution of Apache Kafka

"If Kafka is your engine, Axual is your racing car"



Axual: Your racing car for Kafka



Explore

- 1 Introducing Kafka
- 2 Why You'll Want To Use Kafka?
- 3 Why Kafka Alone Is Not Enough?
- 4 What Is A Streaming Platform?
- 5 Axual - A Complete Streaming Platform for Businesses
- 6 What Does Axual Platform Offer?
- 7 How Axual Adds Value To Your Business
- 8 Axual In Action



A Super car to get you from A to B

With a super car you'll get your use cases quickly into production.



Introducing Kafka

In 2011, LinkedIn created Kafka as a mechanism to handle the trillions of messages passing through its organization daily. Since then, it forms a vital part of LinkedIn's infrastructure and is now used by more than 30% of Fortune 500 companies.

It is a distributed event streaming platform that has grown in strength and popularity over the past decade. Kafka solves the bottleneck of conventional data processing, where data is collected and transferred in batches. With Kafka, data is transferred in real-time.

Kafka reinvents how data exchange happens between various components on a network. It allows real-time data processing by using a fault-tolerant and highly-scalable setup. Companies using Kafka are more responsive to change and able to harness the full benefit of data intelligence. But why?



Why You'll Want To Use Kafka?

Renowned companies like Twitter, Netflix, and Spotify have made Kafka part of their data **infrastructure**. Here are great reasons why you should be doing the same.

- 1** Kafka operates with a native publish/subscribe mechanism. Producers and consumers are loosely coupled, and they can work independently from each other. **Producers don't need to wait for consumers to retrieve the published data. Data are published to Kafka broker regardless of the response from consumers.** It also means that you can scale Kafka according to your organization's needs.
- 2** Kafka doesn't remove messages once the consumer reads it, like more transactionally oriented messaging systems. Data is stored for a specific period of time, and partitions storing the data are replicated as a fail-safe measure. You'll never suffer data losses just because a server has broken down.



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- 3** Kafka is real-time. Unlike batch processing, data exchange happens in real-time in Kafka. This means that you can act upon data as soon as it is created. No more waiting hours or days before transaction records are transferred from one department to another. No more frustrated customers that receive late notifications.
- 4** Kafka is designed for high-availability. Multiple brokers make for multiple entry points into the platform, so you can always add new data, even when one of them is down unexpectedly or needs maintenance. Because data is replicated on multiple brokers, whenever one of them becomes unresponsive, another can always take over and your data is always available.

Why Kafka Alone Is Not Enough?

Apache Kafka is the popular choice among architects, developers and system engineers for real-time data processing. **While Kafka is doing a great job as a pub/sub data streaming platform, it lacks in certain aspects to be a comprehensive solution.**

While implementing Kafka, be wary of these challenges:

- 1** It lacks a user-friendly configuration and monitoring interface. Developers can only use the CLI command tool to set up Kafka, which requires a lot of knowledge. You can't easily monitor Kafka parameters through a visual UI.
- 2** Kafka is complicated to deploy. While Apache Kafka is free to download, setting it up can be challenging. You'll have to become very familiar with the details of the documentation to get it properly configured. There are a lot of parameters you're required to work with.
- 3** Steep learning curve. Picking up the ins and outs of Kafka can be tricky, even for seasoned developers. Unfortunately, Kafka doesn't make it easier with its tools and configuration.
- 4** Security is not enabled by default. It is entirely possible to roll out a fully unsecured Kafka, even unintentionally. The tools to secure it are available, but they require knowledge to implement properly.
- 5** Organizations may need to comply with local regulations in how they store and manage the data. Kafka does not have features that ensure strict data governance.



What Is A Streaming Platform?

A streaming platform is a centralized node for real-time event processing. It's an infrastructure that allows producers and consumers to publish and consume messages in a decoupled manner.

With a streaming platform, organizations have a common interface to manage, process, and analyze real-time events that are crucial for their operations.



The Streaming Platform in the heart of your organisation



Axual – A Complete Streaming Platform for Businesses

Axual is built on top of Kafka and incorporates additional functionality to provide a comprehensive streaming solution.

By enabling people to work together on a shared pub/sub platform, Axual transforms Kafka into a marketplace, where applications can exchange business events the moment they occur.

Axual is the expressway where various departments' business events are stored, processed, and accessed in real-time. It inherits Kafka's advantages, which makes it a scalable, fault-tolerant, and always-available data streaming platform.

Axual is Kafka made complete.

Additionally, Axual provides a user-friendly visual interface, with which data owners and application developers can easily set up and manage data streams. It makes deploying a data-streaming platform on premise, on the cloud, or on a hybrid setup easy.

Axual allows high-level functionality to integrate apps based on tenant or environment. It also allows schema assignment that is 100% compatible with Apache Kafka.

In simple words, Axual is a streaming platform that lets you get the full power of Kafka in a managed and controllable form.



Axual Platform Offers

Self-Service Data Governance for Streams

Streams (topics), applications and their owners are registered centrally, governed decentrally by your DevOps teams

1

Multi-cluster

Scale your streaming platform securely across multiple clusters, in on-prem or cloud clusters, or in a hybrid setup.

2

Seamless to your connecting apps

Connect any application to Axual Platform.

3

Cloud, On-premise or Hybrid Cloud

What **suits you** the best.

4





Various Roles & Needs

A streaming platform on top of Apache Kafka will grow rapidly over the years throughout an enterprise, affecting all possible departments and people. Kafka-out-of-the-box offers not all the requirements a large enterprise is faced with in view of this.

Axual has mapped the various roles of people within an enterprise and their different needs and addressed these requirements in their platform.



Roles	Needs	Description
 Data Owner	<ul style="list-style-type: none"> Data Governance Schema Management Data Lineage Application Governance GDPR Compliance 	<ul style="list-style-type: none"> Be in control of corporate data at all times, including data location and data versioning Register data formats centrally, manage decentrally to facilitate agile development practices Monitor data where it comes from and where it goes to Register and monitor applications that connect to your data streams Metadata level (v5.0) and message level (v5.x)
 Decision Maker	<ul style="list-style-type: none"> Data Governance Schema management Data Lineage Application Governance GDPR Compliance 	<ul style="list-style-type: none"> Has references in the same sector, relevant security and quality certifications Technical Tool Steep Learning curve Desire to maintain business flexibility and IT agility for the future Vendors must support flexible enterprise contract to accomodate specific requirements





Roles	Needs	Description
 IT Architect	<ul style="list-style-type: none"> Data Governance Schema management Data Lineage Application Governance GDPR Compliance Application Governance GDPR Compliance 	<ul style="list-style-type: none"> Architects are looking for proven reference architectures, not just building blocks Deployable in own data centers and in multiple different clouds Synchronize messages and offsets between any number of Kafka clusters Infrastructure deployed by configuration Apply the same security rules to multiple clusters Asymmetric encryption that protects sensitive data when flowing through Kafka (and clouds) Support multi-vendors setups, e.g Axual, Confluent, Aiven, CloudKarafa, Amazon & Azure
 Developer	<ul style="list-style-type: none"> Data Governance Schema management Data Lineage Application Governance 	<ul style="list-style-type: none"> Support autonomous teams in streaming Allow applications stream data 24*7, even during outages or planned maintenance windows Allow applications to run their own unit tests and integration tests Control the platform through API's that can be run from any CI/CD pipeline
 Operator	<ul style="list-style-type: none"> Data Governance Schema management Data Lineage Application Governance Data Lineage Application Governance 	<ul style="list-style-type: none"> Logically bind applications to a tenant Bind applications to an environment, allowing e.g. "test" and "acceptance" streams on shared infrastructure Visualize everything that goes on during operations Allow operators to be notified when pre-defined thresholds are exceeded Common catch-all rules for typical situations Simple and concise operations through well-developed scripts



What Does Axual Platform Offer?

- 1** Axual is real-time data streaming simplified.
- 2** By using Axual, you're letting our platform handle Kafka's tough part and spares you time in focusing on what you do best – your business.
- 3** It only takes 3 months from planning to production, and that's just how efficient Axual is.
- 4** While we've added layers of functionalities, the true essence of Kafka is never compromised. Therefore, you're getting a data streaming solution that's secure by default, low-latency, and with high throughput.
- 5** What's new is the user-friendly interface that allows self-service monitoring, logging, and graphing the numerous real-time events.
- 6** You'll also enjoy 24/7 support should you encounter any difficulties with our platform.
- 7** Rest assured that your data security is always our top priority. We're ISO/IEC 27001 Certified for information security. Besides, banking and energy market leaders use Axual.



Take full control. The power of Self-service

Besides the various people that have their role within the platform, there is of course the platform itself. Lets start with the dashboard. As soon as you login, the dashboard will be shown

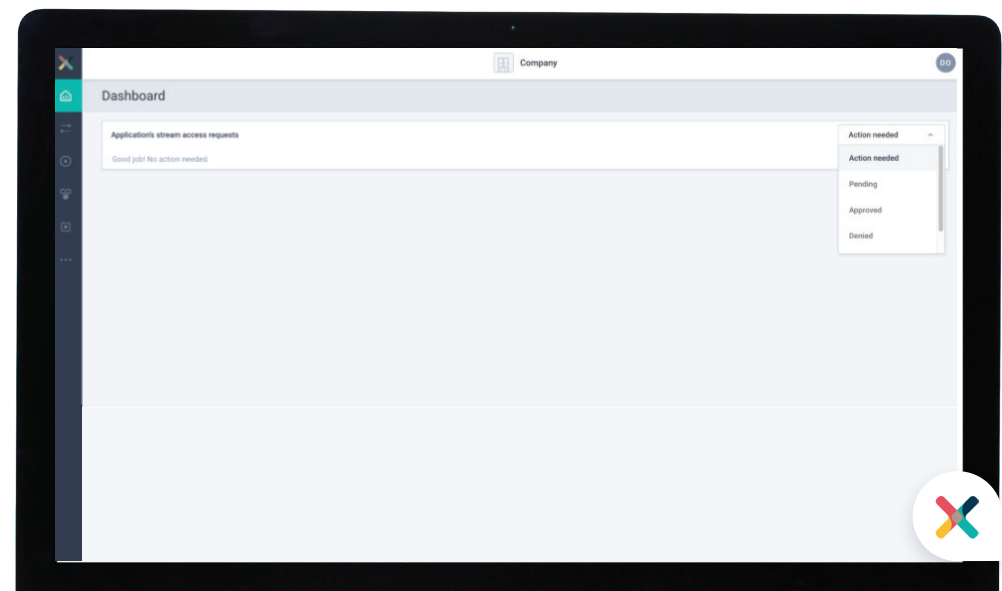
What is Self-service?

Self-service is aimed to facilitate application owners (developers) to use streaming data to build their data driven use case. It allows data owners to control which application accesses what topic, and it provides an overview in general on which data streams are available within the organization.

When you are building your streaming use case, there are typically a lot of steps to take before your application is happily consuming/producing in production. Whether you are consuming from an existing stream, or planning to produce to a new one, Self-service guides you through the process of setting up your application and stream. Moreover, it allows you to have fine-grained access control on your streams.

Dashboard

As soon as you log in, the dashboard will be shown. Here you have an overview of all stream access requests that need an action, are pending, approved, denied or have been revoked. If you are a member of the group owning a stream, the action-needed-list is displayed when you first visit the page. Otherwise, the pending-requests-list is displayed.

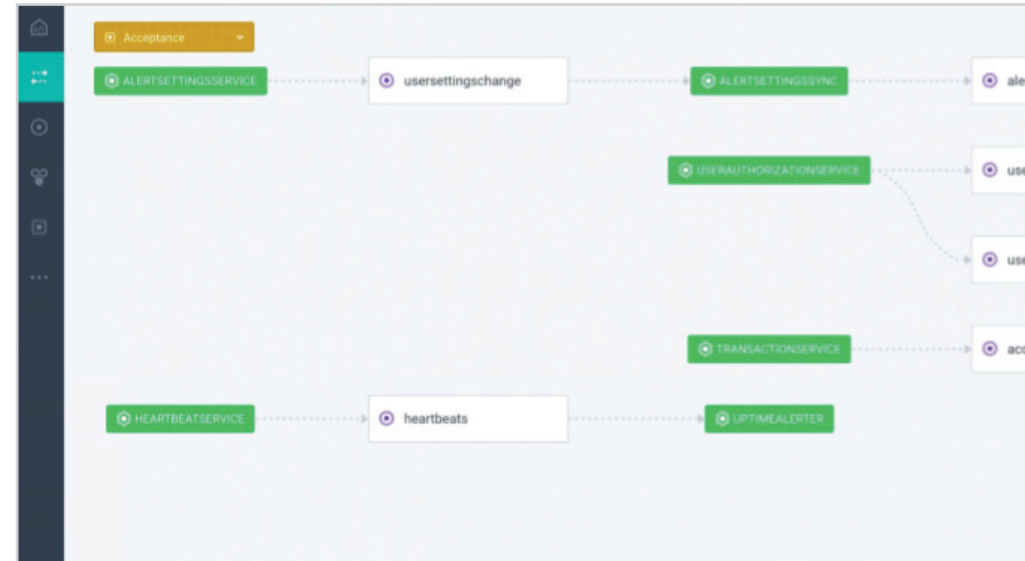


In the graphs below, you can see a streaming platform has its place in the heart of your organization. Using and scaling the platform is extremely easy across different environments.

A Stream Graph

In this page you can see a graphical representation of all applications consuming and producing streams in the selected environment. Use the dropdown in the top to switch to a different environment.

Stream graph



Streams Overview

The Streams overview displays a list of all streams, so you always have an overview of everything and can clearly see who is the owner of that stream.

Streams overview

Name	Description	Owner
usersettingschange	User settings change events are fired whenever a user of Company updated...	Data Owners
accountentries	Accountentry events occur whenever a transaction takes place on a custom...	Data Owners
userauthorizationchange	Authorization change events are fired for authorization changes.	Data Owners
outbound-ems	The outbound-ems stream is used as a data source to send outbound SMS ...	Data Owners
heartbeats	The heartbeats stream is used for uptime monitoring of the entire platform.	Data Owners
userprofilechange	User profile change events.	Data Owners
outbound-push	The outbound-ems stream is used as a data source to send outbound Push ...	Data Owners
alertsettings	The alertsettings stream contains the actual alertsettings for every user.	Data Owners

More Screenshots on how Axual platform makes it easy to manage everything yourself can be found on our website www.axual.com.

Want to know more about our platform?
Watch our Self-service tutorials!



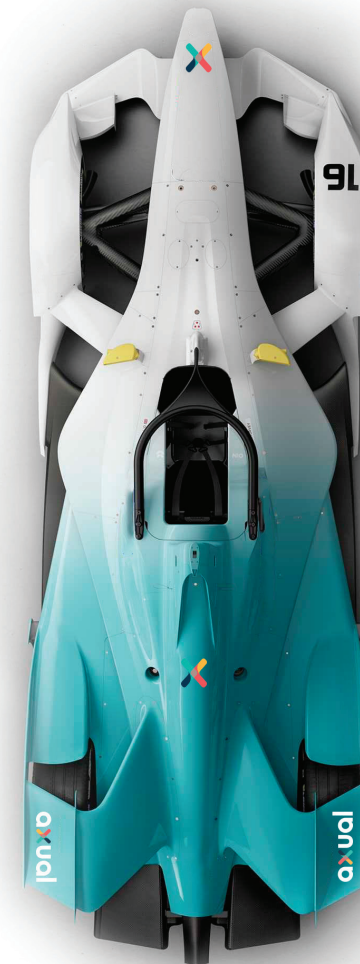
How Axual Adds Value To Your Business?

Kafka, on its own, is difficult to set up and implement despite its obvious benefits. This is similar to how Linux is hardly useful for the public until it's deployed as an operating system like Red Hat. Red Hat is built on top of Linux, but with added features like security and cloud-compliant.

Similarly, Axual is built on top of Kafka but with features that make real-time data streaming for businesses easier.

Axual is a cost and time-saving solution for businesses that hope to leverage a cutting-edge distributed event streaming solution. It puts a streaming tool used by companies like LinkedIn and Twitter within many other organizations' reach without going through a complicated setup process.

Rather than a tool, Axual is your partner in embracing data streaming technologies. We're the reliable experts that'll get the data going for you in the shortest time.



Axual In Action

Rabobank

In 2015, Axual becomes the perfect solution for Rabobank for its needs of a reliable Business Events Bus. It started as a standalone project, where Axual is used for sending alerts to Rabobank customers in real-time. Axual ensures that there is no delay between trigger events and the alert notifications received by the customers.



Eneco

Eneco, realized that real-time analytics is key to energy sustainability in the Netherlands. The key to doing so is to have an Event Streaming Platform that consolidates real-time data from various connected devices. Eneco found the ideal solution in Axual. Within 2 months, Axual delivered a streaming platform that's tailored for Eneco's operating environment.

With results:

"With the help of data, it can be better determined how much heat should be put into the pipes. In this way we can save 20-30% energy and this is immediately beneficial for the customer." – Ronald Root, Manager Data Analytics and AI Center of Excellence at Eneco.

For the complete use case of Eneco, see:
<https://axual.com/blog-case-study-energy/>



Try Axual For Free

Wondering if Axual is the right fit for your organization? Is it as usual-friendly and a powerful streaming engine as claimed? [Request a Demo](#)



Your data is there when you need it

Your days of anticipating cluster breakdowns are over. Our technologies actively synchronize the data stream to ensure that data availability is never an issue.



Easy data stream management

No more tedious command lines. Leverage our Self-service interface to configure and manage data streams easily.



One stream, many environments

Minimize skew in testing by using the same data stream for every stage of development.



Schema governance made easy

Need to define metadata for the various data streams? Get it done swiftly with the Axual platform's schema management tool.



Be a part of our success story

Join clients like Rabobank in leveraging the Axual platform for data availability and security. Fuel your development with a solution trusted by renowned organizations.

