

How Lenses makes Kafka smooth sailing at Vortexa

Vortexa is an energy analytics provider. They offer the most complete dataset for global refined products and crude oil movements which supports traders to formulate forward trading decisions on the market.

Their advanced real-time analytics service is built around an Apache Kafka streaming data platform; made up of two clusters and over 250 streams in each cluster. The uninterrupted flow of data and fast delivery of new data services to their customers is critical to their business.

*“While Kafka and Kafka Streams are extremely powerful technologies, they are black-boxes. Lenses created **unprecedented visibility into the real-time data flows** in Vortexa’s Kafka infrastructure, helping to **reduce development cycle times and build confidence in R&D**”*

- Maksym Schipka, CTO, Vortexa

- ✓ **Today,** Lenses is a one-stop-shop for prototyping, debugging and administration of Kafka.
- ✓ Troubleshooting a problem on a flow can be done within one minute with Lenses compared to hours using previous tools.
- ✓ A new data flow can now be developed with no coding and deployed into production in one hour compared to days of effort previously.
- ✓ They now have a real-time topological and performance view of their evolving data landscape including their Kafka Stream applications.

Kafka Black Box

As Vortexa scaled up their Kafka environment they encountered several challenges. Ad hoc administrative tasks were burdensome and required a lot of manual effort. Investigation of incidents involved a series of in-house developed scripts and open source tools, and lacked providing a view of the performance of their applications.

Creating and deploying new data flows was a manual coding task and involved a lot of trial and error before getting into production.

Ten Minutes to Ten Seconds

Today, both engineering and operations use Lenses for insights into the Kafka environment. Everyday tasks performed by developers that are essential for creating high-quality services, such as inspecting messages on a stream, understanding the profile of a topic, or verifying topics have the right replication factor are now easy.

Previously, such ad-hoc tasks took around five-to-ten minutes and were achieved using a combination of different CLI tools and open source UIs. Having a one-stop-shop for prototyping, debugging and operations now brings that time down to seconds.

*"I've found Lenses' clean UI **absolutely brilliant for creating Kafka connectors.** Lenses makes experimenting with connectors almost trivial, it's so **fast to change config and redeploy**"*

- Kit Burgess, Data Scientist, Vortexa

Investigating Consumer Problems Down to One Minute

The availability of their Kafka platform is critical as Vortexa's customers make decisions worth millions of Euros on the confidence of having correct and up-to-date information.

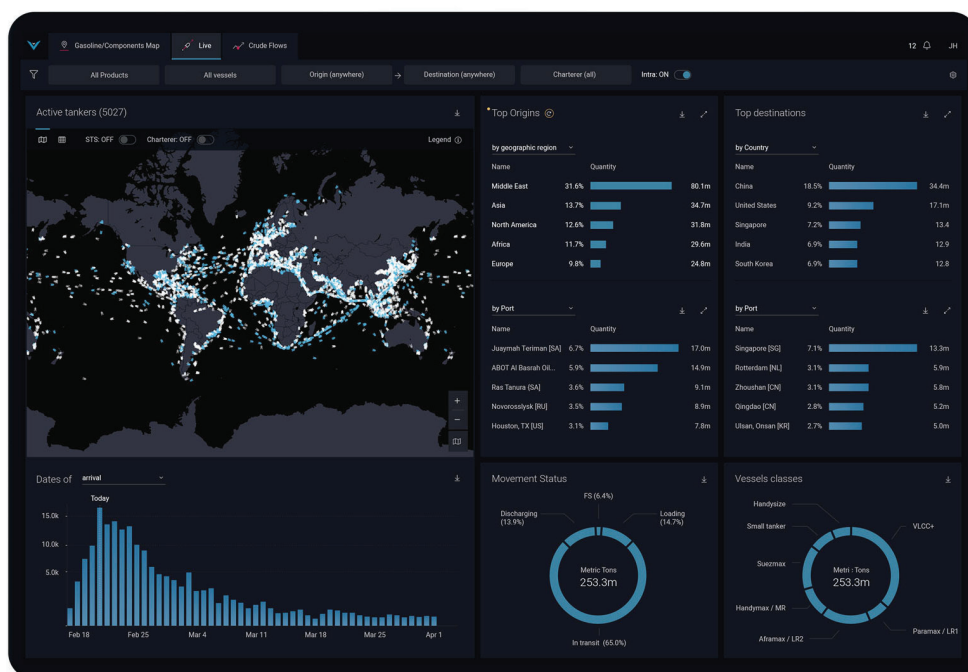
Consumer problems, and in particular identifying the root cause of performance degradation in a consumer group, was a difficult challenge. With Lenses, they track consumer performance and can instantly alert when a consumer has high lag.

Prior to Lenses, Vortexa had tried Confluent Control Center but found it placed too big load on their brokers. They also attempted to use various open-source Kafka tools but struggled with limited functionality.

Vortexa estimates that troubleshooting a problem on an application can be done within one minute using Lenses compared to hours using previous tools.

*"We had problems with Confluent Control Center putting significant strain on our Brokers and other open source tools, such as Kafka Manager, lacked the rich features. Lenses is one of the lightest on resources and **gives us the single tool that we need to make us productive**"*

- Jakub Korzeniowski, Head of Data Services, Vortexa



Building Data Flows

Deploying new data pipelines that integrate data across their different technologies, such as Elastic Search and Redis, can now be built with no coding and deployed in minutes with Lenses' open source connectors and helm charts.

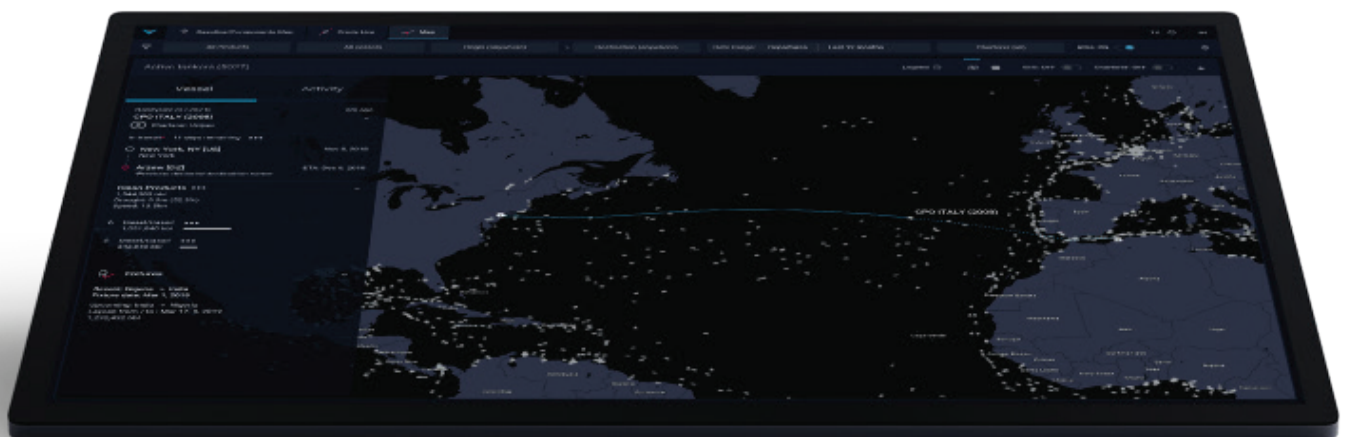
Lenses allows Vortexa to first prototype a new data pipeline: empowering engineers to test their configuration in a UI and explore and validate the data created in the stream.

Prior to Lenses, feeling that the Kafka-Connect framework lacked enterprise-readiness, all the data integration connectors were in-house developed applications.

Lenses provided the enterprise-features Vortexa required to adopt Kafka Connect. They estimate that through Lenses, a new data flow can be developed and deployed into production in one hour compared to one day of effort using Kafka Connect connector without Lenses and several days of effort when maintaining their own connectors.

*“Lenses has streamlined prototyping and deploying Kafka connectors to S3, Redis and Elasticsearch, by **removing the need to context-switch between configuration and monitoring**, and by feeding back error messages due to misconfiguration. This has greatly reduced the development time needed to complete these tasks”*

- Richard Mathie, Platform Engineer, Vortexa



Monitoring Flows

Many of Vortexa's apps are based on the Kafka Streams framework. By integrating the Lenses topology client into their Kafka Streams applications, Vortexa is able to see a real-time topological view of not only their data landscape (including their flows to Redis and Elastic Search) but also inside their Kafka Streams applications.

This allows their Developers and SREs to better understand the streams and identify where there are bottlenecks are, such as low message rate throughput as well as drilling-down to see consumer group lag.

*"Having a real time visual map of all our Kafka applications **allows our devs and SREs to instantly understand how environments are wired**, making misconfigurations far less likely"*

- Jakub Korzeniowski, Head of Data Services at Vortexa

Conclusion

As a real-time commodities analytics company, Vortexa has high requirements for its data to be delivered to customers in a timely and reliable manner. Lenses provides Vortexa with the ability to shorten the development cycle, extend their applications quicker, together with the confidence to measure and deliver on their SLAs.



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