Roman Melnyk

Platform Engineer: Apache Kafka | Kubernetes | Cloud

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github.com/aywengo/
stackoverflow.com/cv/romeo

Summary

Platform Engineer with extensive expertise in designing, implementing, and maintaining Apache Kafka clusters and cloud-based infrastructures. Over a decade of experience across industries such as intellectual property, video content optimization, and renewable energy, holding roles including Kafka Subject Matter Expert (SME), Infrastructure Lead, and Platform Engineer.

Author of Kafka Schema Registry MCP Server.

Proficient in technologies like Kubernetes, Docker, Terraform, CI/CD tools (ArgoCD, GitHub Actions), cloud platforms (AWS, GCP and MS Azure), and programming languages like Python and Scala.

Work experience

Kafka SME

Mar 2024

European Patent Office

- Designed, implemented, and maintained Apache Kafka clusters to ensure high availability, scalability, and optimal performance.
- Conducted performance tuning to optimize Kafka cluster efficiency and address bottlenecks in data flow processes.
- Ensured security compliance by implementing robust measures for secure access, encryption, and role-based permissions management.
- Diagnosed and resolved technical issues in Kafka clusters through comprehensive troubleshooting methodologies.
- Integrated Kafka with other systems while facilitating cross-team collaboration to support seamless workflows across organizational units.
- Utilized technologies such as Docker, Kubernetes, ArgoCD (CI/CD), GithubActions, GCP, ELK/Grafana, and Prometheus to deploy and monitor Kafka solutions effectively.

Platform Engineer/ Infrastructure Lead

August 2022 - Mar 2024

vidIQ.com

- Conducted audits and implemented improvements for cloud streaming platforms, including AWS MSK, Apache Kafka, Amazon Firehose, Kinesis, and DynamoDB.
- Performed security audits of Kubernetes clusters (AWS EKS) and executed the migration of sensitive data to AWS Secrets Manager, AWS Key Management Service (KMS), and AWS Parameter Store.
- Integrated new workflows by incorporating GitHub Actions and ArgoCD into the development and deployment pipelines.
- Established a Kafka Connect cluster to streamline data integration processes within the organization.
- Enhanced performance and stability of services hosted on AWS by applying industry best practices.
- Utilized technologies including Terarform, CI/CD, Docker, AWS, Kubernetes, Apache Kafka, ArgoCD, GitHub Actions, OpenSearch, Scala, Python, ELK/Grafana, and Prometheus to achieve operational excellence.

Independent Kafka consultant

October 2020 - August 2022

Dacadoo,Insurance platform, Swiss

- Designed and implemented a real-time data pipeline utilizing Kafka Confluent Platform and AWS Kinesis for efficient cross-cloud streaming ETL.
- Delivered comprehensive training on Apache Kafka and Confluent Platform to enhance platform adoption and technical proficiency.
- Leveraged technologies including Apache Kafka, Kubernetes, Helm, Azure, AWS Kinesis, and Apache Kafka Connect for robust data streaming solutions.
- Utilized KsqlDB and Lua scripting for advanced stream processing and data transformation tasks.

- Employed Java programming to integrate custom functionalities into the data pipeline infrastructure.
- Ensured scalable and high-performance system architecture across multi-cloud environments with a focus on reliability and efficiency.

Sacala developer - Independent consultant

May 2020 - October 2020

Two Up Digital, Gambling, UK

- Development and maintenance of backend systems for a gambling platform, utilizing technologies such as Scala 2, Cats, Tapir, and fs/2.
- Implementation and management of distributed message-based systems using RabbitMQ and Apache Kafka to ensure seamless communication across services.
- Deployment and orchestration of applications within Kubernetes environments, focusing on scalability and reliability.
- Integration with Google Cloud Platform (GCP) services to enhance infrastructure capabilities for the platform.
- Optimization of system performance and functionality through modern functional programming paradigms and tools.
- Collaboration on design and development processes ensuring adherence to best practices in backend architecture for gambling platforms.

Scala/ML Developer - Independent consultant

Nov 2017 - May 2020

scalac.io

- Development and deployment of scalable applications using Play Framework versions 2.3 and 2.5, ensuring robust performance across projects.
- Implementation and optimization of distributed computing solutions with Apache Spark for machine learning tasks, enhancing data processing efficiency.
- Integration and management of cloud services on AWS and GCP platforms to support a variety of customer needs.
- Utilization of Mesos/Marathon for container orchestration to improve application scalability and reliability.
- Collaboration with diverse clients as an independent consultant to deliver tailored technology solutions in machine learning and software development domains.
- Application of machine learning techniques within various technological frameworks to address complex business challenges effectively.

Scala/ML Developer

Jun 2017 - Nov 2017

RiskIdent (part of Otto group)

- Development and maintenance of core software components to ensure system reliability and performance.
- Oversight and support of release and deployment processes to streamline software delivery.
- Collaboration with the data science team to design and integrate advanced methodologies for fraud detection.
- Utilization of Scala, scalaz, Apache Kafka, Elasticsearch, and Spark technologies in software development activities.
- Implementation of scalable solutions for processing large datasets to enhance fraud detection capabilities.
- Integration of new tools and techniques into existing systems to support business objectives in fraud prevention.

Senior Software Developer

Mar 2014 - Jun 2017

GFT Group

- Delivered two projects connected with credit risks calculation apart for one of the biggest investment banks in the world.
- Worked with Cloudera infrastructure: HDFS, Spark, Hue, Impala, HBase, and Hive.
- Participated in design and develop ETL upload engine to HDFS through Spark batch. The main purpose of the project was consuming file reports: from gz or CSV file into ordered, calculated and systemized Hadoop data structure. After that, this might be populated by another's teams and internal services: for credit operators, regulators or even for top managers.
- Gave internal company course dedicated to functional programming in Scala
- Recognised as "The best team player in 2014"

Technologies used: Scala, Spark, Cloudera, JS/Angular

Senior Software Developer

Oct 2011 - Mar 2014

Win-Interactive LLC (division of bwin.party)

- Contributed to the development of back-end systems within the PokerGame Server team, ensuring robust and scalable performance.
- Delivered new features for the Poker Engine, aligning with project deadlines and quality standards.
- Developed a back-office tool from the ground up, streamlining operational workflows and increasing efficiency.Participated in the design and development of a poker simulation tool, enhancing testing capabilities for complex scenarios.
- Recognized with the "Best Employee of 2012" award for outstanding contributions and exemplary performance.
- Utilized technologies including C++, .NET (C#), Boost, TPL, and WCF to deliver high-quality solutions.

Senior Software Engineer

Jun 2011 - Oct 2011

Softserve inc.

- Leadership of a team consisting of five engineers on a project focused on supervision and reporting for food delivery corporations.
- Delivery of new software releases, ensuring timely updates aligned with client needs and project goals.
- Implementation of an updated data access layer design to enhance system performance and maintainability.
- Utilization of .NET, C#, ASP.NET, and MS SQL Server 2008 technologies to develop and support robust application functionality.
- Facilitation of collaboration within the team to meet technical requirements and resolve development challenges efficiently.

Software Engineer - Team Leader

Sep 2007 - Jun 2011

State Inspectorate for the electricity on South-West region of Ukraine

- Led a distributed team of 6 members to successfully deliver CRM and Automated Control System projects for a company with over 1,000 employees.
- Coordinated project planning, development, and implementation to ensure timely delivery of key systems.
- Applied expertise in .NET, C#, ASP.NET MVC 3, and MS SQL Server 2008 to develop reliable and efficient software solutions.
- Oversaw system architecture design and database management to optimize performance and scalability.
- Maintained accountability for aligning technical objectives with organizational goals within the scope of regional operations.

Junior Software Engineer

2003 - 2007

Vinnytsia National Technical University, Ukraine

- Designed and maintained the official website for the Institute, ensuring functionality, user-friendly navigation, and consistent updates to enhance accessibility and user engagement.
- Collaborated with test and application engineers by providing technical support during testing processes, contributing to the identification and resolution of software issues to improve overall system performance.

Education

Ms of Electrotechnik in Engineering 2002 - 2007
Vinnytsia National Technical University

Computer systems and networks 2006 - 2008
Vinnytsia National Technical University, Ukraine

Certifications

CGOA: Certified GitOps Associate Oct 2024
CNCF
https://www.credly.com/badges/b2bc2e0a-6be1-431a-97b9-e2f959e760db/public_url

CNCF: Kubestronaut May 2024
CNCF
https://www.cncf.io/training/kubestronaut/?_sft_lf-country=pl&p=roman-melnyk

CKS: Certified Kubernetes Security Specialist May 2024 - May 2026
The Linux Foundation
https://www.credly.com/badges/4ec16a62-fd26-42be-816f-95f0933ac85a/public_url

KCSA: Kubernetes and Cloud Native Security Associate May 2024 - May 2026
The Linux Foundation
https://www.credly.com/badges/f4d8c051-cc34-4cbe-906b-013c4aac1da9/public_url

CAPA: Certified Argo Project Associate Mar 2024 - Mar 2027
The Linux Foundation
https://www.credly.com/badges/19d62465-fa5a-4f77-b509-b5a56a15c213/public_url

GitHub Foundations Feb 2024 - Feb 2027
GitHub
https://www.credly.com/badges/b6f75117-4eac-4eca-8d1f-c4796a37b668/public_url

CKA: Certified Kubernetes Administrator Jan 2023 - Jan 2026
The Linux Foundation
https://www.credly.com/badges/f928a145-221d-4d5a-8ae0-6d8f30ee9962/public_url

Prometheus Certified Associate (PCA) Jan 2023 - Jan 2026
The Linux Foundation
https://www.credly.com/badges/c788616a-5d00-4349-bb47-7e48944eecd4/public_url

AWS Certified Cloud Practitioner (CLF-C01) Aug 2022 - Aug 2025

Amazon Web Services Training and Certification

https://www.credly.com/badges/bab1452f-0f63-43e2-9954-3ecbde2d62f0/public_url

KCNA: Kubernetes and Cloud Native Associate Aug 2022 - Aug 2025

The Linux Foundation

https://www.credly.com/badges/47edbf38-12b5-446b-aba9-abcac7f01519/public_url

HashiCorp Certified: Terraform Associate Jul 2022 - Jul 2024

HashiCorp

https://www.credly.com/badges/a77698b8-90c5-4635-87aa-fd9576dacbd6?source=linked_in_profile

Confluent Certified Administrator for Apache Kafka (CCAAK) May 2022 - May 2024

Confluent

https://www.credential.net/213038cb-63dd-4063-bfb3-a023c964e995#gs.4b4m7p

Certified Kubernetes Application Developer (CKAD) May 2022 - May 2025

The Linux Foundation

https://www.credly.com/badges/12a35f1a-7df4-485b-b8d8-6472f5c0a5f2

Confluent Certified Developer for Apache Kafka (CCDAK) Oct 2021 - Oct 2023

Confluent

https://www.credential.net/10411313-ec6b-4bae-9a3a-09a49bd5617a#gs.4b4on3

Certified ScrumMaster Nov 2015 - Nov 2017

SCRUM ALLIANCE

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Courses and trainings

Coursera, Functional Programming in Scala, a 5-course specialization by École Polytechnique Fédérale de Lausanne on Coursera. Specialization Certificate earned on April 1, 2017

Udacity, Deep Learning Nanodegree, 2017

GFT, Apache Kafka, 2019

KodeKloud, Linux Foundation Certified System Administrator (LFCS), 2022

eDx: Introduction to Cilium (LFS146x), 2024

Anthropic Academy: AI Literacy and Model Context Protocol,2025