

CASE STUDY

**SoftServe Implements Data
Science Platform Infrastructure For
International Energy Company**

softserve

Client Background

Our client is an international energy company based in the Nordics. With decades of experience and thousands of committed employees, the company is one of the leaders in developing oil, gas, wind, and solar energy in more than 30 countries worldwide. Focusing on the future, our client is dedicated to evolving its business around renewable energy, while promoting safety and sustainability.

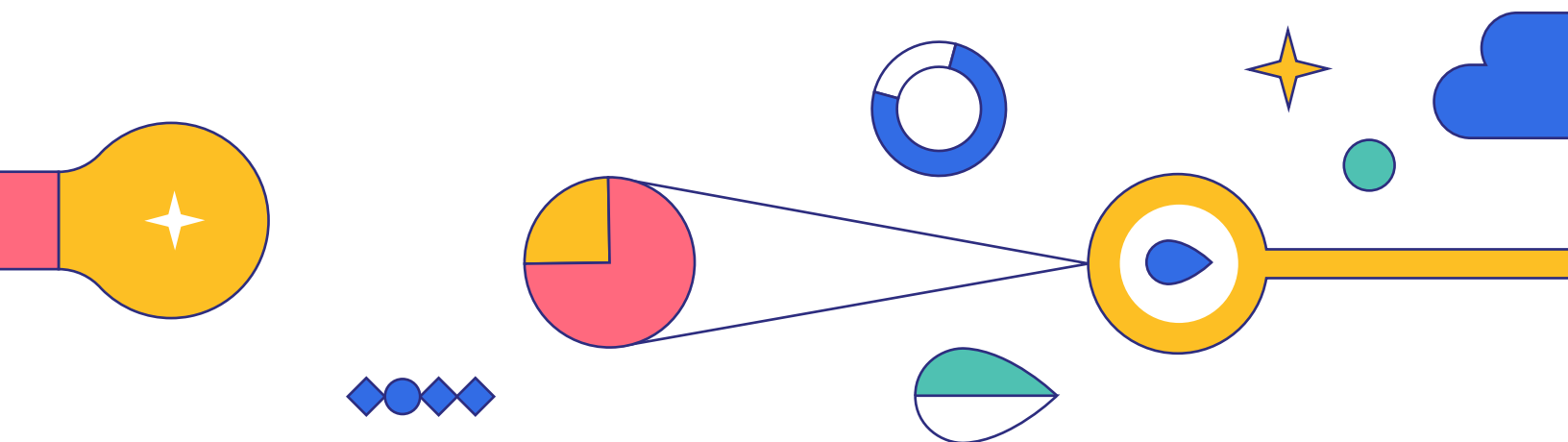
Business Challenge

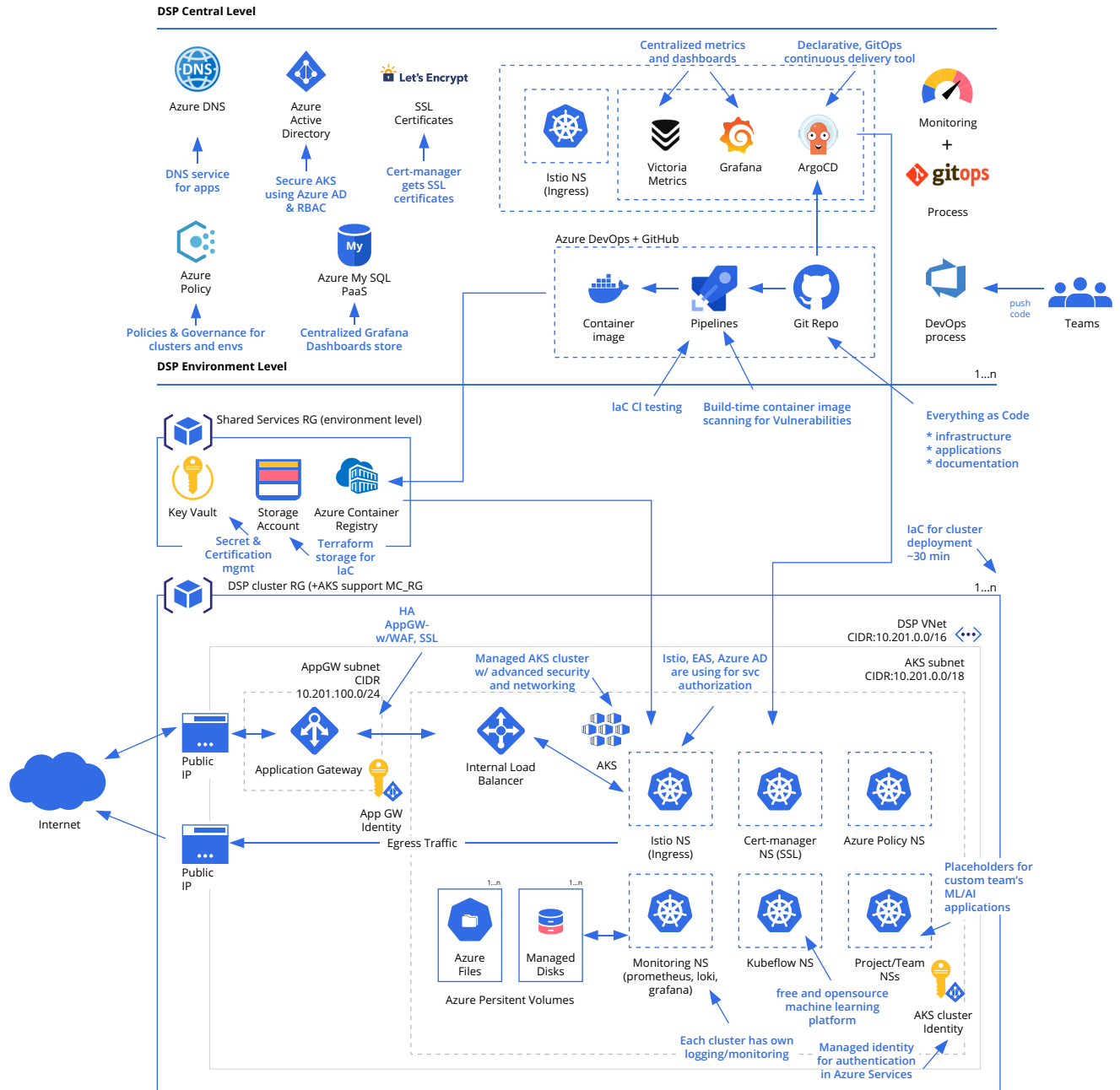
Our client needed to develop its business in a modern and innovative way. It created an in-house data science platform to predict possible risks and, in turn, significantly cut costs in repairs and reduce downtime. Our client asked for SoftServe's expertise to create an infrastructure to manage the platform to increase its efficiency and availability. SoftServe set a goal to build a secure and reliable infrastructure, which would help to quickly onboard new machine learning (ML)/artificial intelligence (AI) services, comply with all security guidelines, and help our client achieve its business goals.

Project Description

Our client's data science platform allows it to rapidly react to all types of risks, for example, unusual seismic activity that could result in equipment damage. To avoid large expenses and long periods of downtime while maintaining and repairing equipment, our client incorporated ML/AI and data science techniques, that help with predicting possible future issues. SoftServe put together a team to research and implement new ideas as a first step. towards managing the platform and processes so that operations could run smoothly and securely.

SoftServe analyzed the platform's structure and processes to design the future infrastructure, which is based on Kubernetes clusters. The platform uses Argo CD – a GitOps continuous delivery tool – to configure the system and implement automated deployment to target environments. This increases efficiency and lets our client's development teams focus solely on their projects without having to worry about manual deployments.



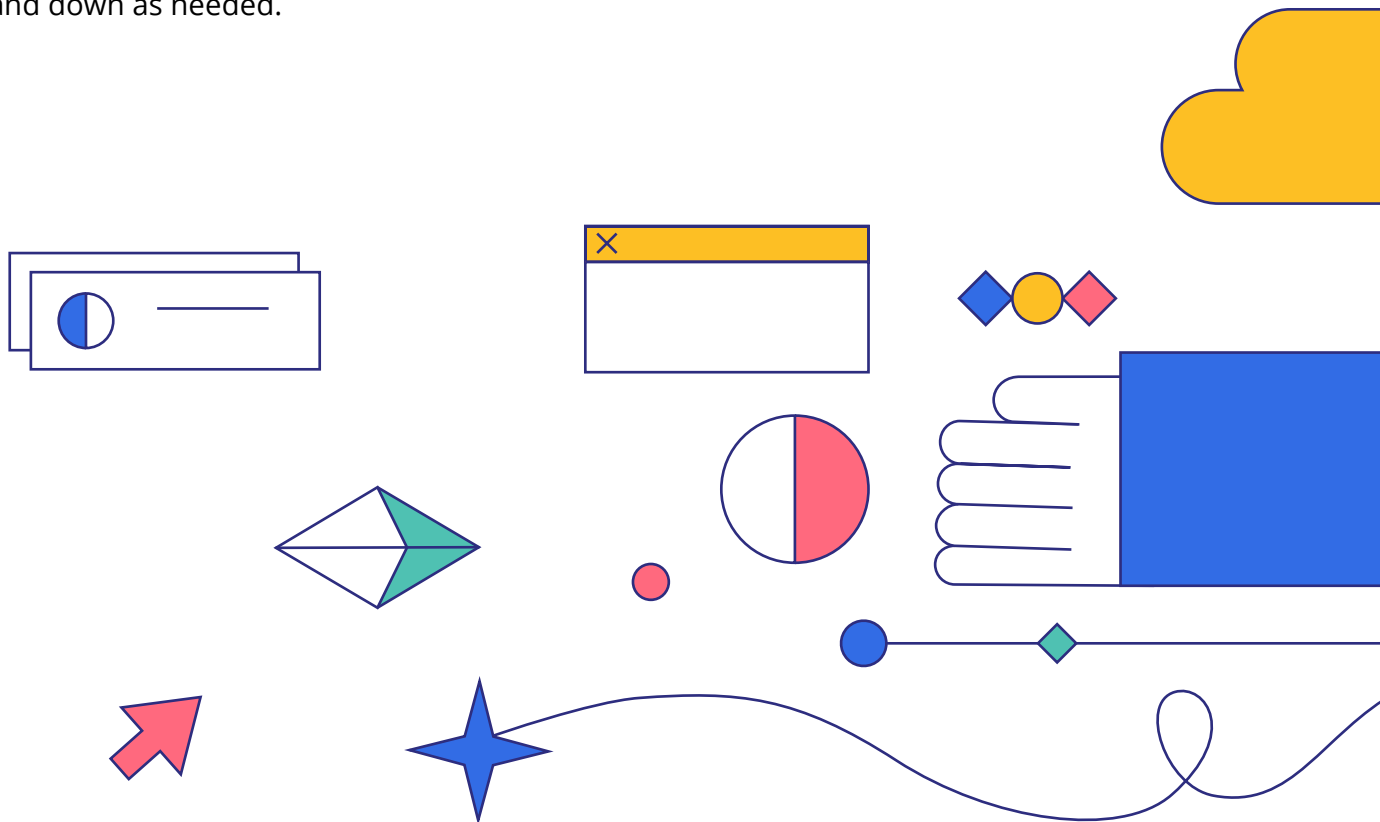


Data Science Platform infrastructure

One of the key objectives was to ensure the platform complied with all security protocols. SoftServe created and implemented internal and external security guidelines. The platform is safe from both external data breaches and internal unauthorized access attempts. Access is granted only to employees within the organization with specific permissions, which are managed by Azure Active Directory.

The number of workloads can drastically increase when the team is setting up new experiments to model certain behaviors. SoftServe made sure the platform could quickly auto-scale according to the demand. Usually, the platform operates on minimum capacity, which completely satisfies all development requirements, but can effortlessly scale up and down as needed.

Since the number of environments was only going to increase with time, it was essential to set up centralized monitoring processes to keep track of all operational and financial metrics. SoftServe used Grafana and Victoria Metrics as measuring tools to store and visualize the data gathered from different environments. These practices allow our client to rapidly and effectively manage risks and even avoid them in certain cases. The monitoring solution also provides cost efficiency by letting our client effectively track all expenses from different projects.



Value Delivered

Our client received a fully automated and scalable platform that satisfied its business needs and gave it a way to efficiently provision and manage its data science products. The solution reduces the time-to-market of the products and services, which gives our client a competitive edge in the market. The monitoring implemented by SoftServe provides cost reduction and reduced downtime by quickly reacting to triggers and risks. The security guidelines ensure high availability and safety, while protecting the solution from different types of hacking attempts, data breaches, and unauthorized access.

Our client's data science platform is only going to grow in future, which gives it the opportunity to implement new ideas and strive for new goals. The infrastructure is sustainable and reliable, which will allow it to expand its business even further in the future.



ABOUT US

SoftServe is a digital authority that advises and provides at the cutting-edge of technology. We reveal, transform, accelerate, and optimize the way enterprises and software companies do business. With expertise across healthcare, retail, energy, financial services, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation, from generating compelling new ideas, to developing and implementing transformational products and services.

Our work and client experience is built on a foundation of empathetic, human-focused experience design that ensures continuity from concept to release.

We empower enterprises and software companies to (re)identify differentiation, accelerate solution development, and vigorously compete in today's digital economy. No matter where you are in your journey.

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