



Customer success story

Container migration of R-studio models using ECS Fargate

About the customer

The customer is a German multinational corporation that produces luxury vehicles, motorcycles and engines. Today, they are one of the world's leading producers of luxury vehicles, and its brand is synonymous with quality, innovation and performance. They have a strong presence in the global automotive market, with manufacturing plants and sales networks in countries around the world. The company is committed to sustainability and has set ambitious goals to reduce its carbon footprint and promote sustainable practices throughout its operations.

Customer challenge

An American multinational vehicle manufacturer has a single R-studio server shared among all users, resulting in low productivity due to frequent server issues. Simultaneous access by multiple users can lead to performance problems like sluggish response times or system crashes. A single R-studio server has limited resources, resulting in resource contention among users that causes slower performance or crashes when the server is overwhelmed. Equal access to data and files on the server poses security risks if an account is compromised, potentially impacting the security of all server data. Additionally, the client

faced challenges with rising R-studio license costs, particularly for organizations with a large user base. To tackle these issues, the company engaged Cognizant to either scale up the R-studio server environment or implement a more robust and scalable infrastructure.

AWS + Cognizant solution description

Cognizant recommends using Jupyter Notebooks in R Studio as a useful way to collaborate with others on data analysis projects. Providing individual containers with Jupyter Lab containing R and Python kernels to all users is a good approach for a scalable and efficient data science environment. It can help address issues arising when a single server is used by all users like performance issues, limited resources and security risks. Users will be able to write R and Python code on Jupyter notebooks and commit them directly to version control repositories. Additionally, users can save their files and folders to network storage attached to the container. Creating separate Docker containers for each process on all the markets can provide a scalable, reliable and secure infrastructure for multiple processes. Docker containers are deployed on the ECS/ EKS. To automate data processing tasks and streamline your data integration processes in an efficient and convenient way, Informatica instances have been integrated to trigger scripts. To optimize resource usage and improve performance, containers (ECS/EKS) are sized based on the process being run. The same is later migrated to Fargate (Serverless Container Engine) to optimize the cost.

Outcomes/results

Cognizant's partnership with AWS has facilitated the migration of the customer's analytics EC2 servers to ECS Fargate containers, and has provided significant benefits in terms of scalability, reliability and cost efficiency. Containerized nearly 70+ analytics models. Through this joint effort, Cognizant and AWS have ensured that the customer's analytics models receive robust support and can effectively adapt to the organization's evolving requirements. By delivering a containerized redundant analytics environment to over 20+ data scientists, collaboration and productivity have improved while ensuring reliability and security for analytics workloads.

About the partner

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. We engineer modern businesses to improve everyday life. Our unique industry-based, consultative approach helps clients transform technology, re-imagine processes and transform experiences ensuring businesses remain agile, relevant and ready to run more innovative and efficient enterprises.

With AWS as our partner, we focus on the outcomes that matter most to businesses and underpin our solutions with deep industry experience and market-leading IP. Cognizant brings more than 13,000 AWS certified professionals, dedicated AWS certified consultants in 43 countries, hundreds of customer launches, and successes, and more than 70 transformational blueprints to drive innovation beyond cloud migration.

As a premier consulting partner, Cognizant holds numerous AWS competencies, including AWS Mainframe Migration, AWS SAP, AWS Migration, AWS Financial Services, AWS Healthcare and AWS Life Sciences. Partner programs include AWS Well Architected, AWS Managed Service Provider, AWS Marketplace Seller, AWS Solution Provider Program and AWS Public Sector Solution Provider.



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