

Migrating to the **AWS Cloud** saved an application's life



CASE STUDY



PGS Software helped the Client to future-proof their applications by migrating them from on-premise servers to the **AWS Cloud. The Client now has an easier, more time-efficient deployment process with virtually no downtime.**



BUSINESS NEED

The Client was looking to bring their applications up to **speed with the digital transformation era**. The company used to host their products on Rackspace's physical servers but decided to move them to the **AWS Cloud**. This choice proved to be a significantly more reliable, and cost-effective solution.

The decision to withdraw their applications from Rackspace's servers put the Client in a predicament. Without the third party's server support, **they would be left helpless** in the face of any potential technical issues. They would simply have no means of fixing them. Hence, the Client realised that they would need to host their applications somewhere else – and fast. It quickly became apparent that the **best solution** would be to migrate them to the **AWS Cloud**.

Having learnt from this experience, the Client knew they would have to do whatever it takes to stay one step ahead of their previous setup. They realised that they needed to not only migrate, but also to optimise the applications' processes. They were looking to have an **easier, more time-efficient deployment process with as little as possible downtime**.

SOLUTION

In answer to the Client's needs, **PGS Software proposed to divide the applications' services**, which were previously hosted on a single server, into separate Amazon EC2 instances. This approach allowed the development team to **easily implement an immutable architecture, exchanging entire instances for new ones during the deployment**.

This development method ensures **zero-downtime deployment**, which facilitates seamless implementation of new versions of the applications. Zero-downtime deployment allows the Client to **release new versions of the application immediately** – while all of the applications' services remain functional and available.

The **PGS Software** team also exchanged the Client's services for Amazon Web Services' (AWS) Managed Services, thanks to which they no longer have to maintain and support them – they can now **take full business advantage of the AWS Cloud**.

The Infrastructure as Code, implemented by PGS Software, is hosted on the AWS Cloud and has been written in Terraform, which allows the development team to **transfer the most recent production environment in mere seconds**. Thanks to this, environments can be set up in little to no time and remain cohesive – there is only one code, which does not require any manual changes to be made within the AWS console. Critical data and EBS volumes are automatically backed up using **AWS Lambda**.

BUSINESS BENEFITS

The technical optimisation and migration of the Client's applications to the AWS Cloud have proved **a tremendous business success**. Most importantly, it has rendered the applications future-proof as they are no longer dependant on Rackspace's support and servers.

Making use of AWS's Managed Services **eliminated the need to maintain and support a server**, eliminating the hassle around server administration, and consequently, rendering the solution less expensive and less time-consuming to develop. **The Client no longer has to worry about server maintenance** - AWS takes care of that for them.

Migrating to the AWS Cloud allowed the PGS Software team to use Infrastructure as Code.

This, in turn, has brought on **many business benefits**. The project was realised faster and, if necessary, any potential codebase changes can be easily recreated - meaning that if any manual errors were to occur, the application will be able to effortlessly return to its original status quo. Additionally, the Infrastructure as Code is **closely monitored, guaranteeing its security**. The PGS Software team ensured that the infrastructure has been prepared for autoscaling meaning that, in case of increased traffic, the application will be scaled accordingly.

The PGS Software team was also **able to optimise the solution** and to realise the

Client's business objective by enabling them to always remain **one step ahead** of their previous setup. The development team provided zero-downtime deployments with an immutable design, ensuring the solution is easily scalable and future-proof.

Using Jenkins allowed for automatic deployments, which helped eliminate manual efforts and has rendered the applications virtually error-proof - as automatic deployment **leaves no room for human mistakes**.

Prior to migrating to the AWS Cloud, the Client had one overloaded server. Today, after PGS Software **optimised their solutions and helped them migrate their applications**, they have many separate microservices. Separating the solution into independent microservices means that different, dedicated teams are responsible for specific services, making the solution **significantly easier to maintain**.

The choice to migrate applications to the AWS Cloud can be seen as an **investment into their future**. One whose benefits the Client will reap for years to come.

PROJECT DETAILS

Solutions — AWS Cloud, Automated Zero-Downtime Deployment, Infrastructure as Code

Technologies — PHP, MySQL, Sphinx, MongoDB, Redis

Tools — Jenkins, Terraform, Ansible, Packer

Team — 3 AWS Certified Cloud Engineers

ABOUT THE CLIENT

The Client provides equity firms, hedge funds, and strategy consultants with information that is meant to help them gain a better grasp on their investment opportunities.

ABOUT PGS SOFTWARE

PGS Software is a public listed IT development centre providing extended teams who develop custom software solutions and deliver end-to-end business services to clients worldwide. As a certified Amazon Partner Network (APN) Advanced Consulting Partner, we specialise in Cloud Transformation (Application Migration & Modernisation). We have 3 development centres in Poland (Wroclaw, Gdansk & Rzeszow) as well as branches in London, Munich & Barcelona. We provide Agile-to-DevOps delivery capabilities such as B2B/B2C web & mobile development, Continuous Delivery, Business Analysis, UX & UI design.

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