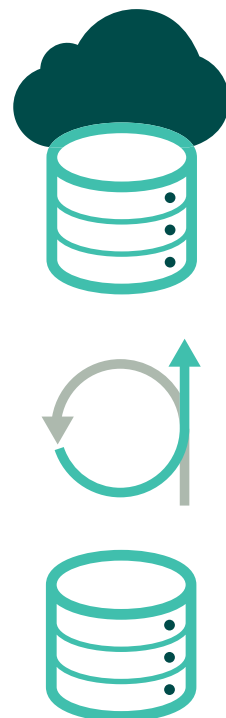# An agile transition to the cloud for a US insurance giant

For companies that operate at an enterprise-level scale, the idea of moving a sprawling on-premises database architecture to the cloud can sound daunting, particularly if its existing infrastructure includes components from vendors that are different from the firm's cloud provider of choice.

An agile transition to the cloud for a US insurance giant

The key to a more manageable process is architecting a solution that maximizes the benefits of the cloud without completely scrapping the existing on-premises platform. A good example is a recent project that Thorogood undertook at a leading insurer in the US, where our consultants worked with the Fortune 500 company to move a large, end-to-end Microsoft solution from its former home on company premises to the AWS cloud.

With underwriting facilities in 15 countries, and with 40 different locations in the United States alone, this specific business division is an expansive operation that relies upon a massive amount of data. Like many companies, the firm was looking to cut costs and improve performance and flexibility when it began to consider migrating that data from an on-premises setup to the cloud. While the firm wanted to use AWS as its cloud provider, it also wanted to continue utilizing its existing reporting applications and databases, which meant considering how Microsoft SQL Server, Analysis Services, Excel and Power BI could work in an AWS environment. The central question was one that often leads businesses to partner with Thorogood: what is the most elegant and efficient manner to intelligently migrate database architecture from on premises to the cloud without completely rebuilding a new platform from the ground up?

Critical to any large-scale cloud migration is well-crafted workflow that preserves data accessibility, integrity and security throughout the build, test and release phases of a project. Such a workflow sits at the foundation of the DevOps tools and principles that Thorogood called upon to orchestrate a phased migration that moved data from the company's on-premises servers and shifted it to Amazon's cloud framework, where data would be stored in the AWS Elastic Compute Cloud (EC2) and in SQL Server databases hosted in its Relationship Database Service (RDS). These would continue to feed their existing SSAS tabular data models, SQL Server Reporting Service, and Excel/Power BI reports.

Key to managing the infrastructure and deployment of the new solution was the utilization of DevOps tools such as AWS CloudFormation templates and Bamboo, a continuous integration and deployment software from Atlassian. Unlike other tools in the marketplace, Bamboo separates the actual build and deployment workflows, which allows for the mapping of specific branches to deployment environments and enables continuous delivery.

Another tool that helped facilitate the migration itself was Amazon's Data Migration Service. When Amazon developed its cloud, it did so with the understanding that long-standing companies would be shifting data from a variety of on-premises servers. To allow for such heterogeneity, it developed AWS-DMS, which allows for the continuous copying/replicating of data from a variety of source databases to Amazon's RDS/EC2 transformation and warehousing layer, while at the same time keeping the source databases online. This allows applications that are already connected to those source databases to remain operational throughout the migration.

An important consideration during a transition like the one Thorogood orchestrated is the balancing of business with security requirements. There are a variety of different options and methods when it comes to migrating an existing on-premises setup to the cloud. To comply with the insurer's security needs, Thorogood designed an architecture that made use of the different PaaS and SaaS offerings of AWS. The key to a successful migration is developing a plan that leverages available resources in a manner specific to the company in question. In other words, a plan that works best for the IT team while at the same time complying with the company's security requirements and providing end users with the access and functionality that they need. It is a delicate process with a number of important variables to consider, but with the proper expertise and appropriate technology, the vast majority of legacy architectures can make a seamless transition to the more efficient world of the cloud.

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