Transforming Big Data into Big Value with AWS Cloud Analytics

Organizations today must manage, secure, and make sense of data that is growing at exponential rates. Oftentimes, data sits across multiple siloed applications and on-premise databases that can no longer scale to support this sudden increase in data volume, variety, and velocity. As a result, the infrastructure often suffers from inherent problems like higher cost per terabyte, legacy architecture design that is difficult to scale, and an inability to derive insights from data stored across silos.

To help organizations scale for the future, AWS has built a broad range of data management and data analytics capabilities that can help clients deploy scalable, secure, and cost-efficient big data solutions. Leveraging AWS's scalable cloud environment, Deloitte is helping organizations across a variety of industries choose the right cloud analytics and big data strategy to maximize the value they can derive from their data.

Maximizing network usage and improving on-time performance for Network Rail

Network Rail is the infrastructure manager of the railway network in the United Kingdom. The company saw a real potential to maximize the usage of spare capacity to alleviate overcrowding caused by increased demand. The then-existing approach of railway timetable planning was a cumbersome and inefficient process of manually collecting data from multiple incompatible systems. Deloitte worked with Network Rail's timetable planners to develop an AWS-based analytics system that automates the data integration across ten different systems and rapidly analyzes billions of rows of data generated by the railway signaling system.

The end-to-end platform was built on AWS-based secure cloud services including AWS Identity and Access Management (IAM), Amazon Simple Storage Service (Amazon S3), Amazon Redshift, and AWS Data Pipeline. The system helped the timetable planners to improve train punctuality while also significantly reducing the time spent on analyzing data. Network Rail realized about £7M of direct benefits from this project in the form of reduced delay payments to train operating companies. The project won the “Best Public Sector Project” award at the UK Cloud Awards in 2016.
Deloitte helps create a 360-degree view of valuable insights by helping organizations capture and analyze full datasets, and remove silos

We have seen a shift in big data cloud services as they move from batch analytics to stream processing like Kinesis, from virtual machines to managed services such as RDS, and server-based services to serverless cloud services like Elastic Map Reduce and DynamoDB. AWS cloud analytics services like these help organizations to improve their analytics and generate new value by leveraging advanced analytics capabilities such as machine learning, natural language processing, and others available natively in AWS.

As big data services continue to evolve, so must your strategy. A cloud-enabled big data strategy can help organizations gain a competitive edge—while reducing costs and enhancing operational efficiencies—by migrating large-scale workloads to big data technologies on the cloud. Failure to correctly address big data challenges can result in escalating costs, as well as reduced productivity and competitiveness. That's where Deloitte can help. We're helping organizations maximize the value they can derive from their big data services investment by establishing a cloud analytics and big data strategy equipped with the right machine learning and cognitive capabilities in their applications. As a result, Deloitte helps organizations lower costs and enhance operational efficiencies.