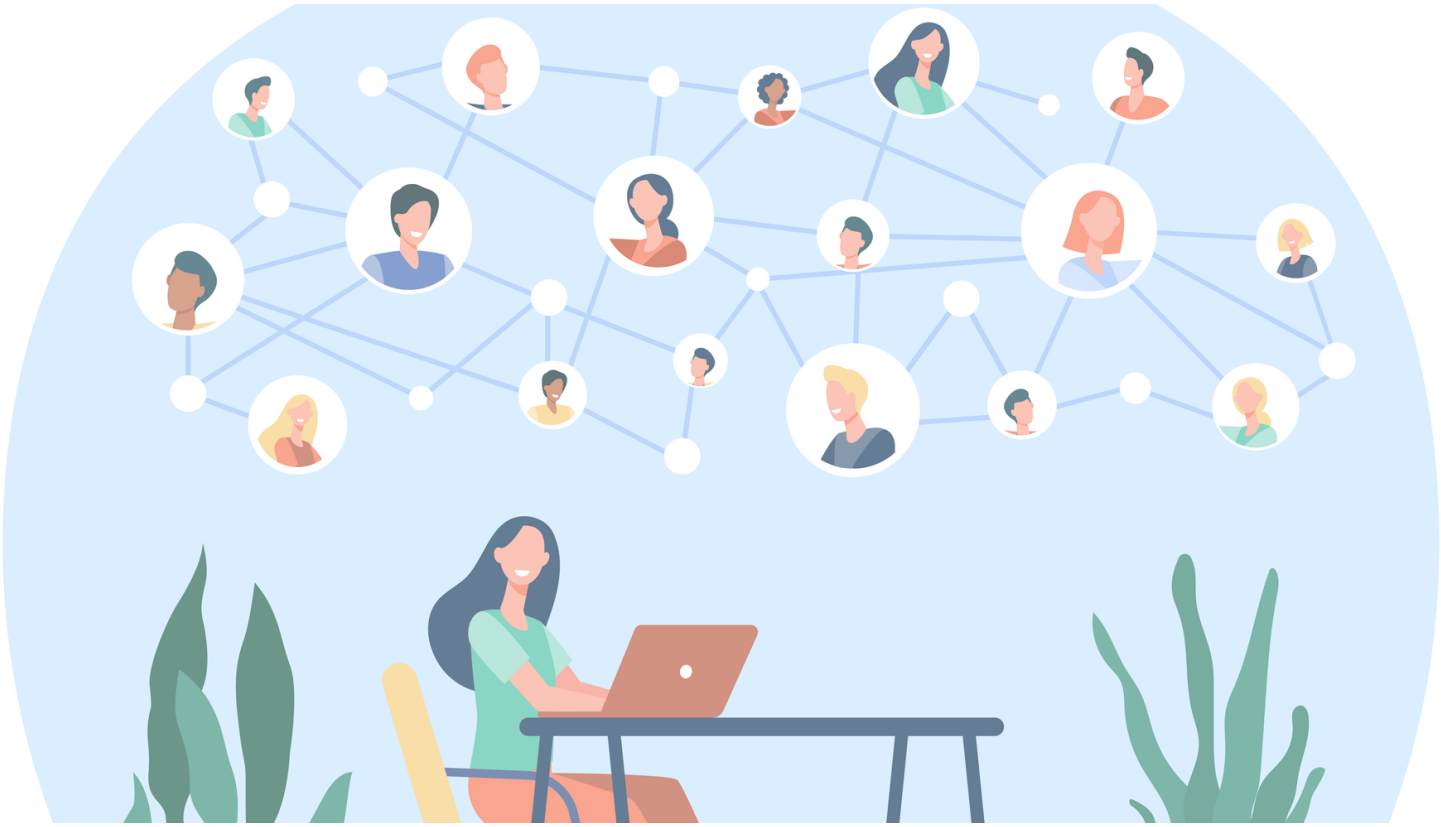
VATSA SOLUTIONS

Case Study

Enhancing Network Bandwidth with Big Data

Leveraging Data Engineering solutions for enhanced bandwidth and internet speed



Overview

A UK-based telecom and ISP services provider wanted to improve their bandwidth, internet speed, and network across their service geographies. They planned to enhance their network strength by addressing common complaints across the geographies. The primary concern of users was the delay in issue resolution caused by the shortage of engineers. A critical factor in the service's delay was the time it took to identify the location of the issue raised by the user and determine its specifics.
The client organization wanted a solution that allowed users to report real-time issues in the network and allot engineers at their convenience to resolve their queries faster.

Our Expert's Solution

Streamlining network operations with Data engineering

Our experts provided the client organization with their technical expertise to develop a Big Data solution with data engineering features that enabled the client's users to report network disruptions, bandwidth disturbances, and network disclosure in real-time. Through the solution, consumers can request an engineer without having to wait for customer support processes. Our team of experts is well-versed in network monitoring metrics and has implemented solutions that help businesses to improve their telecommunications network planning, increase internet speed, and fix issues quickly.

The solution was originally designed for on-premises deployment; however, the enormous data volume made it challenging for the application to process and store data. Hadoop was introduced to effectively handle the large volume of data. The solution was then moved to the AWS cloud platform because it was more flexible and could handle more users. Data engineering and data analytics were the most critical components of the solution.

The Big Data solution with Hadoop-as-a-Service (HaaS) helped store, co-relate, aggregate, and analyze various data types from multiple upstream sources. The data was processed using different workflows and transferred to the Central Database using Sqoop. The reports can be generated from the Dashboard, which queries on Central Database.

Powered by Machine Learning-enabled monitoring capabilities, the system could comprehend and provide appropriate resolutions for new and recurring network issues. It enabled the client organization to monitor, debug, and generate reports describing the network's health and availability as seen by the users. The solution consists of separate UIs for the consumers and the telecommunication organization/stakeholders.

Result

A network outage causes a substantial loss for the client organization. Such unexpected outages can be proactively identified with the Big Data solution and addressed before sizable damage occurs. Other benefits of the solution include:

- Better cost savings
- Faster resolution of network issues and reduced issue turnaround time
- Drastic reduction in on-field work for both engineers and sales personnel
- The solution allowed users to change their telecommunication plans as per their needs easily

Technology and Tools

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