

Call center monitoring solution for service quality management system

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Companies often introduce new products to maintain competitiveness. However, it is the service quality and the resulting customer satisfaction that are decisive for long-term business success. Moreover, companies profit from the additional benefit of getting to know their target audiences much better along the way. Lastly, continuous service quality management enables companies to identify and reduce sources of errors and customer complaints. Because there are a few different factors that influence service quality, call center managers must know what they are before they can work to optimize them. Any imaginable goods or service provider in any sphere of business or public activity relies on call centers to a certain degree - they help build partner-customer relationships and provide technical assistance. The first factor that influences service quality in the call center is the degree of accessibility of the agents [1, 2]. The degree of accessibility of a team takes into account the following: how long the customers waited in the queue; how many customers abandoned their calls in the queue before speaking with an agent; how long the customer spent waiting on hold after speaking with an agent; the customer's experience navigating through the IVR; meeting the Service Level Agreement requirements.

While there are worldwide recognized studies and implemented approaches, the way of acquiring data from Call

Centers is usually very unique, as it needs to match the set of tools and phone system used. Designing and assembling a solution to reliably collect, process, store and analyze such data will improve communication and increase efficiency.

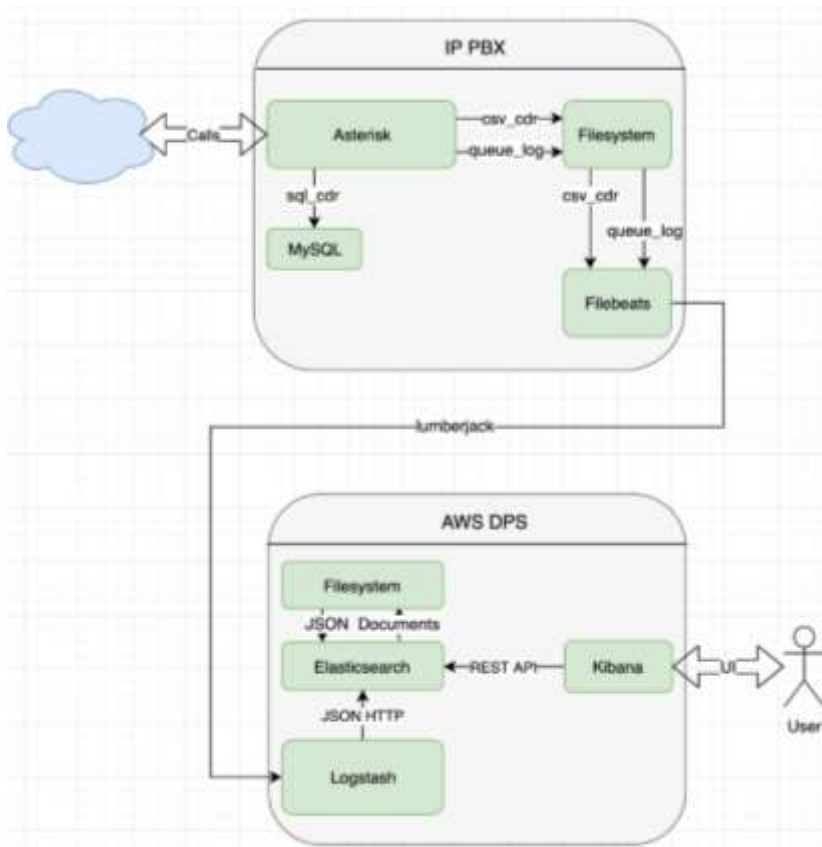


Fig. 1. Call center monitoring solution overview scheme

The proposed solution is driven by applying the type of IP PBX engine based on Asterisk. The ELK Stack has been chosen as the optimal approach: it is open source and covers a need in the log management and analytics space. A combination

of Elasticsearch, Logstash and Kibana provides great scalability and load management, and is an amazing toolkit for very diversified customer needs in terms of types of data pulled, building graphs and visualizations, scheduled reports, etc. [3] Collecting call data and storing it in to the filesystem is performed by using the Asterisk's default logger module [4]. It was decided to move Logstash to a dedicated server and Filebeat is the best fit-for-purpose here. Filebeat also adds metadata to the message to be used for identification later on, such as a unix timestamp, PBX domain name, serial number.

The solution will help to automate the call flow process, where it is necessary, based on the analysis of the collected Call Centers data. It also eliminates the need to hire additional staff or outsource call centers to share the load.

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