FACEBOOK GLORY BY Jesus Ambriz

Facebook took the world by storm when it found its way to people's lives and hasn't stopped since. In order to satisfy billions of facebook users, facebook needed to figure out a way to maintain information, share photos, be able to handle the messages that billions of users are sending and create their own custom application servers that will maintain the system. To overcome these challenges they needed to lay down a new architecture for the application servers. The application server that facebook uses is a new software made from scratch by their engineers. In the beginning facebook used Dark launches to uncover performance issues and identify bottlenecks. The technology that goes behind the ability to be able to have millions of users sending messages is Apache HBase and other systems. Apache HBase was chosen over the previous server, Apache Cassandra. Apache HBase was used because of the good performance, organization, and scalability for the workload that was going to be needed. HBase tables can hold information from action logs, metadata entities, indexes, and keyword search index. HBase is also compatible with top of hdoop and HDFS. Since all different forms of messages will be sent through the server Facebook needed more services to be able to handle all decision making of the user. Attachments are stored in Haystack, if a recipient is specified by his or her email address the server is able to grab the attachment from Haystack to eventually build an RFC2822 message. Haystack implements a http photo server and stores photos in a generic object store called haystack. Haystack is broken down to layers. Http servers, photo store, haystack object store, file system, and storage. It is truly amazing what facebook has been able to do with haystack to successfully be able to share data. Facebook also uses ZooKeeper which is a centralized service for maintaining configuration information, naming, providing distributed synchronization, and providing group services. To be able to support full text search, facebook uses Apache Lucene to parse and convert keywords message ids or positions into tuples, and then the information goes to the HBase column. Each word contains its own column which has all the information from messages, chat history, email. Apache Lucene develops open-source search software that includes lucene core, Solr, open Relevance Project, and PyLucene. Facebook has created new innovated ways to share information in real time with billions of users. Facebook has made it very simple for users like me to be able to share my information with classmates and work easier in a class environment while keeping me connected with my social network.

Information Received from

https://cwiki.apache.org/confluence/display/ZOOKEEPER/Index, http://lucene.apache.org/, http://en.wikipedia.org/wiki/Tuple, http://hbase.apache.org/, http://haystacksearch.org/, http://zookeeper.apache.org/