Case Study

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Many companies and institutions are moving more and more of their processes and information into a cloud-based system. With the amount of data available and being collected, it is significantly easier to store that data off site as it removes some of the responsibilities of the company or institution and saves them space and man power which leaves those people free to tackle other more pressing issues.

In the case of the City of Chicago, the idea was to create a safer and more responsive system between all areas of the city services by having a single view of all the goings on within the city. Brett Goldstein, the cities chief data officer, wanted to make a more cohesive system of services between all the different departments to keep his city clean and safe, and then when there is a problem, that the is a coordinated response from everyone to deal with the problem as smoothly and efficiently as possible. He and his team used all the existing applications, and created new applications, together to be able to combine all the incoming data from multiple those original administrative systems into the MongoDB application that was then able to interpret and adapt the information into something usable.

In this situation, the Mongo DB was used to compound all the existing systems into one single application, that could be used by multiple divisions within the city to ensure that everyone was able to respond and deal with any issues that arise quickly. The 911 calls that come in, are then pinged in the database and can then help dispatch determine the best route to the scene of the incident. While that is happening, the system is tracking the buses and making sure that they can stay on route on time and can adjust their route if the police department needs to close down a road while they deal with their situation. On top of that, if there is a community event going on, this wont cause additional disruptions to the bus routes, but also for the garbage pick up schedule for the neighborhood. The system doesn’t just collect information from the cities own systems, it also uses twitter and the information that the general public is generating to keep all of these things as current as possible. Not only does the new application and database do all of this, but it also must be able to evolve the schema for all the data in real time to prevent any slowdown in the application.

Windygrid is able to help all of the different public service departments to operate with increased efficiency and to try and catch things that are going to become a problem before they actually do. The fact that the database can assess the incoming information and can alert the appropriate people to a potential incident before it is reported as an issue is the most exciting part of the project. Chicago is trying to become a safer place for its residents and for the tourists who go there, and to be able to respond to issues significantly faster and get normal life back on track for its residence as soon as possible. Ideally the emergency services will be able to get to the scene of an incident almost as its happening, and they can take care of things before they have a chance to become a bigger problem.

Truly, the amount of information that the database collects is astounding, and the fact that the City of Chicago was able to make something truly usable, and accurate out of the mass amount if information is a huge accomplishment, and its not just for the public service works. The city also releases the information to the public, who can use the information to plan their commutes and to make sure that their busses are on time. The public will know where the snowplows are so that they can make sure they get their cars out of the way during a snow emergency or any number of other delays that they may have to navigate to get around the city.

Being able to share so much information about what is going on in such a densely populated area is so critical to keeping everyone safe and to alleviate any traffic issues that may be cropping up. It is, and was, a huge undertaking that challenged how data was collected, sorted and used and with the help of MongoDB, the City of Chicago has managed to create a solution to the quintessential problem that all large cities face.

Resources

Case Study: MongoDB and the City of Chicago. (2015, September 23). Retrieved October 20, 2019, from https://www.mongodb.com/presentations/launchpad-mongodb-and-the-city-of-chicago.

Chicago Uses MongoDB to Create a Smarter and Safer City. (n.d.). Retrieved October 20, 2019, from https://www.mongodb.com/customers/city-of-chicago.