Cloud Platforms and Database System

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Cloud Platforms for Distributed Database

Cloud based distributed database systems are designed to provide a new level of flexibility and usability that their old-school in-house counterparts. There is not much benefit for companies to have their own server systems anymore unless they are responsible for sensitive data, that they really don’t want anyone to have access to it from anywhere except on site. But even the cloud-based systems are becoming so much more secure, that eventually it will become obsolete.

The first benefit of the cloud-based distributed database is that it is significantly cheaper to run than having an in-house system. By not having to maintain their own server room, a company can save a significant amount of capital by not having to have a huge server room, that needs a massive cooling system, or even just the manpower to keep the system running and bug free. Using a cloud system, while it also has some drawbacks, will be less expensive in the short term, and more than likely, the long term also. It allows the technology team to spend more time with the other issues and being able to develop other resources to help the company be more competitive.

Similarly, the cloud-based system is going to be more reliable. The nature of a cloud-based system alone, is designed to be more reliable by not having the information stored in a single location. Applications will be less likely to go down, since the users will have access to the software from multiple access points, rather than just one. Queries in the database will be able to access the information from multiple nodes, rather than a single access point, and the users can access the information from any location. They won’t have to be at the office, or on a certain device to be able to access the data, provided they have the correct credentials, they should be able to access the information from any location and from any device. That’s not to say that there can’t be IP limitations set so that employees can only access the information from certain devices, but that is part of the benefit of a cloud-based server. If employees can only access data from their company laptop, then it does provide an extra level of security to the integrity of the data.

Another benefit of a cloud-based system is that multiple people can be looking at the information at the same time and there would be no slowdown in the processing power of each individual query. Since each user can access the data through a different node, there is minimal bottleneck for the data to go through. The data can be sorted, updated, changed, and queried all at in real time, and everyone else’s database will be up to date all the time. They are, after all, looking at the same database, just from different access points. So everyone has access to the same data, just from a different access point.

There are many benefits to a cloud platform database system, and while we have only explored a few options, many of them do go together to provide a more secure, and more reliable system. There will be very few companies that rely on in-house database systems in the future, since they are not that much more secure, and are not as reliable as a cloud type system. While some industries do still rely on an in house system, it will be uncommon for companies to expend all those resources for something that they can use and have other people manage for a minimal cost.

Resources

Hayes, M. (2012, February 20). Cloud Database -A Distributed Database Technology - Cloud Computing: Tech Blogging: Web Security. Retrieved October 12, 2019, from <https://comtechies.com/cloud-database-a-distributed-database-technology.html>.

What Is A Distributed Database? And Why Do You Need One? (2019, July 12). Retrieved October 12, 2019, from https://www.nuodb.com/resources/content-library/white-paper/why-distributed-database.