**Trends in Database Management**

The world of data management is growing. Currently 14% of enterprises have more than 1 petabyte of information and of this 35% manage data stores in excess of 100 petabytes. Also more then 2/5ths of enterprises have big data initiatives underway to help compete in the modern environment.

One of the main driving forces is that data in the fuel for the internet of things. This idea is basically summed up by the ability to collect real-time information from anywhere, and then move it to the appropriate application. This allows for useful data to be collected from home to the work floor and anywhere in-between. The main way this is being accomplished is the addition of sensors to products to stream performance data.

Another major concept is the idea of the cloud in data collection and use. The core concept here is the idea of a database as a service. This allows for the designing, building, testing, and provisioning of applications from anywhere at any time. Currently 54% of IT and data managers run in the cloud to some degree and of this 82% say they plan to increase their use of the cloud.

Tied to this concept of the cloud is the idea of mobility in data collection. Mobile applications are being built to allow user to access the backend data. Along with this is the development to allow mobile devices to store allocation state locally when a connection is not available and then sync with the backend when the connection is restored.

Improving the support for business users is a major push for both frontend and backend designers. One way of doing this is through data virtualization. Data visualization allows for a graphical representation of the data which allows for easier analytics. This concept is not new but the ability to virtualize data on a large scale was not possible 10 years ago. Another way is to allow users to build their own frontends and queries which allows for more accurate and useful database access.

Open source is a new and growing area of data management. Apache Hadoop is the main open source imitative. This is a collection of software that handles all aspects of data management. It is a NOQSQL design. Currently 30% of enterprises have deployed Hadoop and 11% plan to adopt it within a year and 52% of enterprises have an NOSQL database of some type on site, the most common being a document database.

The final trend is the use of in-memory processing. This is using the computers main memory for data storage. This allows for faster queries and access. Currently 32% of companies run in-memory databases and more than 75% use in-memory websites. Of this 76% intend to step of their adoption of in-memory technology.

References

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