The practical and System Challenges of Managing Big Data

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Abstract

Data is everywhere, and is being used in all sorts of ways to derive valuable information. Data is being generated, stored, managed and analyzed at unprecedented rates. This data has huge VOLUME, arrives at a very high VELOCITY and comes in a VARIETY of different forms and shapes. In fact, big data applications have become indispensable in as diverse fields as physics, political science, commerce, social science and geographic applications. In many of these context, major Privacy concerns arise especially when big data is managed and stored remotely in the Cloud. Big Data have thus posed fundamental challenges to the ways traditional data management systems are designed and implemented as well as how data is consumed and analyzed. They have also given rise to the era of large globally dispersed data centers. In this talk, we will explore, using a variety of different applications, some of the system challenges posed by Big Data, while focusing on the analysis, management and privacy of information in large data centers.

Bio.



Amr El Abbadi is a Professor of Computer Science at the University of California, Santa Barbara. He received his B. Eng. from Alexandria University, Egypt, and his Ph.D. from Cornell University. Prof. El Abbadi is an ACM Fellow, AAAS Fellow, and IEEE Fellow. He was Chair of the Computer Science Department at UCSB from 2007 to 2011. He has served as a journal editor for several database journals, including, currently, The VLDB Journal, IEEE Transactions on Computers and The Computer Journal. He has been Program Chair for multiple database and distributed systems conferences, most recently SIGSPATIAL GIS 2010, ACM Symposium on Cloud Computing (SoCC) 2011, COMAD (India) 2012 and the first ACM Conference on Social Networks (COSN)2013. He currently serves on the executive committee of the IEEE Technical Committee on Data Engineering (TCDE) and was a board member of the VLDB Endowment from 2002 to 2008. In 2007, Prof. El Abbadi received the UCSB Senate Outstanding Mentorship Award for his excellence in mentoring graduate students. In 2013, his student, Sudipto Das received the SIGMOD Jim Gray Doctoral Dissertation Award. In 2015, Prof El Abbadi and his co-authors are the recipients of the ICDT 2015 Test of Time Award for their work on heavy hitters in data stream analysis. He has published over 300 articles in databases and distributed systems and has supervised over 30 PhD students.

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