A biased guide to building a web-scale OLTP service

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Abstract—Many OLTP deployments in the web-scale industry start with a single-node open-source DBMS, add automation to manage many instances of the DBMS and then work with an open-source community to make things better via a large number of small improvements. The end result is far from perfect but frequently good enough to allow a business to focus on something other than the DBMS. The result is also frequently misunderstood by members of the DBMS community from academia and industry. I have been part of the incremental web-scale DBMS effort for almost 10 years and think there is much to be gained by reducing this misunderstanding. We have interesting data management problems but are often far removed from our peers in industry and academia. In this talk I will explain why we used the incremental approach, where it has thrived and failed, and our priorities when considering new solutions.

I. BIOGRAPHICAL SKETCH

Mark Callaghan worked with great teams to make MySQL better for scale-out deployments at Facebook & Google for 9+ years. His current focus at Facebook is the analysis and improvement of database algorithms and storage systems for OLTP workloads. He also works with WebScaleSQL and RocksDB to make MySQL and MongoDB better. Prior to his web-scale work he spent many years working on RDBMS internals at Oracle and Informix. He invented and implemented a very fast general purpose sort algorithm for the Oracle RDBMS. He has an MS in CS from UW-Madison.