Abstract

Recently, a new era of application development is emerging, which is based upon big data technology and the ease of access to compute resources, such as mobile devices. All these issues can be better supported using JSON (and JavaScript) technology. Almost all relational database systems have integrated JSON, partly according to the specification given in the ANSI SQL standard and partly according to other specifications. In this article we discuss several JSON features and investigate how different relational database systems (RDBMSs) have integrated them. Of all database systems discussed in this paper Oracle has implemented the most concepts specified in the ANSI SQL/JSON standard. In contrast to Oracle, PostgreSQL have not implemented any standardized features. Also, we discuss conformance of all these implementations in relation to the ANSI SQL/JSON standard and give suggestions, which important features should be implemented in the future releases of the RDBMSs.
5. Liu, C.H. et al. – Closing the functional and Performance Gap between SQL and NoSQL, SIGMOD’16.
7. JSON in Oracle Database, http://docs.oracle.com/database/121/ADXDB/json.htm#ADXDB6246
12. Schinckel, M. Querying JSON in Postgres, schinckel.net/2014/05/25/querying-json-in-postgres
15. UPDATEXML, https://docs.oracle.com/cd/B19306_01/server.102/b14200/functions205.htm

**Index Terms**

Computer Science

Databases

**Keywords**

JSON, SQL/JSON, relational database systems, JSON integration