



How OmniDB overcame the complexity of database management

Powerful and lightweight database management

Introduction

OmniDB is an open-source web tool for the management and conversion of databases. It is multi-platform, runs on all major operating systems, and supports all of the most popular database management systems (DBMS). The team responsible for OmniDB is small, two computer scientists and a graphic designer, but their first concern will always be to offer a high-quality platform that provides users - who range from developers through to database administrators - with a unified workspace, enabling them to work with many DBMS, and different databases, all in the same way.

The screenshot shows the OmniDB web interface. On the left is a sidebar with a tree view of database objects: tool_database, Local File, Tables (10), db_type, data_categories, data_types (highlighted), representatives, themes, users, command_list, connections, conversions, and conv_tables_data. The main area displays a SQL query: `select * from data_types t order by t.dbt_st_name, t.dt_type`. Below the query, it says "Query 10 rows" and "Number of records: 10". A table with 10 rows and 7 columns is shown. The columns are: cat_st_name (varchar), dbt_st_name (varchar), dt_type (varchar), dt_in_sufix (integer), dt_st_writeformat (varchar), dt_st_readformat (varchar), and dt_st_compareformat (varchar). The rows list various data types like text, boolean, byte, bigint, datetime, fp, float, guid, integer, and bigint.

	cat_st_name (varchar)	dbt_st_name (varchar)	dt_type (varchar)	dt_in_sufix (integer)	dt_st_writeformat (varchar)	dt_st_readformat (varchar)	dt_st_compareformat (varchar)
1	text	access	binary	0	#	#	#
2	boolean	access	boolean	0	#	#	#
3	text	access	byte	0	#	#	#
4	bigint	access	complex_type	0	#	#	#
5	datetime	access	datetime	0	#	format(Nz(CStr(#), ''), yyyy-M...	format(Nz(CStr(#), ''), yyyy-M...
6	fp	access	double	0	#	#	#
7	fp	access	float	0	#	#	#
8	text	access	guid	0	#	#	#
9	integer	access	int	0	#	#	#
10	bigint	access	long	0	#	#	#
11	+						

The Challenge

The goal of OmniDB is to offer a workspace that allows users to comfortably manage databases and data in their browser. While other similar web apps allow this through the use of static grids and simple HTML components, the team behind OmniDB wanted users to be able to do this in a manner that simulated working on a desktop environment. There are several grid components the team could have used to achieve this, but they ultimately lacked key-features that the team required, in addition to performance. And while the team has the skill necessary to develop their own component, it isn't what they wanted to focus on while creating OmniDB.

The Solution

The OmniDB team had already used Handsontable in other projects, and were already familiar with Handsontable's build quality, performance and feature set. And one of the most valuable features of Handsontable for the OmniDB developers, was the ability to mimic key functions of MS Excel in a web environment. Which meant that Handsontable was the perfect component for what the developers wanted to achieve with OmniDB: creating a familiar, intuitive, and powerful workspace in which to manage multiple databases. With the addition of Handsontable, users of OmniDB are able to:

- Navigate through cells using the keyboard.
- Copy and Paste data to and from the grid.
- Select groups of cells.
- Execute massive actions at the same time.
- Render HTML content.

Results and Plans for Future

Many users have testified that using OmniDB is far more comfortable and intuitive than similar tools they have used before, with most specifically commenting on the grid component. The grid component is also something that the OmniDB developers are asked about frequently, and when presenting at FISL 2016 (International Free Software Forum) in Porto Alegre, Brazil, the first question that followed the hour long talk was: "What is the name of the grid component?" The developers of OmniDB will continue adding support for more DBMS to OmniDB, while they have plans to also support additional database structures such as triggers, views, sequences and grants. On the horizon is a substantial upgrade to the database conversion feature of OmniDB, but given that all new features and updates will continue to offer a user-friendly interface with which to manage data, the use of Handsontable as the grid component will not change.

"If you are looking for a responsive, web based component that simulates what MS Excel does, there is no better component than Handsontable."



Rafael Thofehrn Castro

CEO at OmniDB

OmniDB

Curitiba, Brasil

3+ employees

omnidb.com.br