



STAC-M3: The industry standard benchmark suite for tick database stacks

Analyzing time-series data such as tick-by-tick quote and trade histories is crucial to many trading functions, from algorithm development to risk management. Recent trends like the growth and sophistication of automated trading and the proliferation of new regulations place a premium on technology that can accelerate the analysis of time-series data.

In 2010, several of the largest global banks and other trading firms in the [STAC Benchmark™ Council](#) joined forces to develop common ways to measure the extent to which emerging hardware and software innovations improve the performance of tick analytics. The result was STAC-M3™.

The STAC-M3 Benchmark suite assesses the ability of a solution stack such as columnar database software, servers, and storage, to perform a variety of I/O-intensive and compute-intensive operations on a large store of market data. The specifications are completely agnostic to architecture, which means that STAC-M3 can be used to compare different products or versions at any layer of the stack, such as database software, processors, memory, hard disks, SSD, interconnects, and file systems.

STAC-M3 consists of a baseline suite that provides performance insight using a modest amount of gear, plus as an optional scaling suite that increases data volumes and simulated user counts.

Dozens of STAC Reports™ have been published using STAC-M3, either publicly or in the members-only STAC Vault™. In addition, numerous user firms, database vendors, and hardware vendors use STAC-M3 to "mark their performance to market" in the privacy of their own labs.

To get acquainted with STAC-M3, read one of the many public reports at www.STACresearch.com/m3. For more information, please contact council@STACresearch.com.

Get the most from STAC-M3

Any interested party can analyze public STAC Reports to compare the performance of different systems. However, members of the STAC Benchmark Council are able to put these reports to much greater use. Qualified members may:

- Read the detailed test specifications
- Access additional reports in the confidential STAC Vault
- Obtain the materials to run the STAC-M3 Benchmarks on their own systems
- Discuss benchmarks, technologies, and related business issues with their peers.