

“Its performance is exemplary.”

Delphi Informant product review



What customers are saying about Advantage Database Server

“We selected the Advantage Database Server for compatibility with our existing applications, data/index reliability in a networked environment, and outstanding performance. Advantage has proven to be at least two times faster than other SQL servers, and much faster when using incremental searching on very large databases.”

*Kevin Saffer
Chief Architect
Tempus Software, Inc.*

“We evaluated many different database options before selecting Advantage. No other product matched its speed, stability and price-point. Advantage surpassed our original expectations and the technical service is unparalleled in the industry. Advantage has been an integral partner in helping our customers, such as Best Buy, General Mills and UPS, automate their PR Departments.”

*Jason Siegal
Senior V.P., Sales and Product Development
Public Affairs Technologies, Inc.*

About KeyLabs Inc.

KeyLabs, Inc., located in Provo, Utah, is the industry's largest independent, professional testing lab dedicated to testing hardware and software in network environments. KeyLabs has unique expertise and test facilities for testing network, Internet and complex systems. KeyLabs has successfully created the most highly automated open systems testing facility in the world.



**For additional product
information, visit
www.AdvantageDatabase.com
or call: 800-235-7576 ext. 5030**

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Extended Systems, a leader in mobile information management, offers hardware and software solutions that enable mobile users to access, synchronize, collect, print and retrieve information on demand. Products include: data synchronization software, short-range wireless connectivity products (IrDA and Bluetooth), virtual private network (VPN) remote access servers, Internet business solutions, a complete line of network print servers and client/server database management systems with remote access capabilities.

PERFORMANCE BENCHMARK RESULTS

Advantage vs. MS-SQL and Borland InterBase



Extended Systems contracted with KeyLabs, a full-service third party test facility located in Provo, Utah, to conduct a series of benchmark tests comparing Advantage Database Server with Borland InterBase and Microsoft SQL Server. The focus of the testing was to establish relative times for clients to perform a series of tests against each of the above mentioned servers. The tests were run using an Advantage native driver against Microsoft and Borland native drivers and the Advantage ODBC Driver against Microsoft and Borland ODBC drivers.

The benchmark tests were combinations of SELECT, UPDATE, and NEXT operations run on 10, 50 and 100 user Microsoft Windows NT networks. The native driver test results show Advantage performing, on average, 124 times more operations per hour than the Microsoft SQL Server solution and 19 times more operations per hour than Borland InterBase. The ODBC driver test results show Advantage performing 30 times more operations per hour than Microsoft SQL Server and 6 times more operations per hour than Borland InterBase.

The dramatic performance differences are a result of the navigational and relational methods used by the Advantage Database Server.



ADVANTAGE
DATABASE SERVER

www.AdvantageDatabase.com

800-235-7576 ext. 5030

Testing Methodology

A series of seven tests were created by KeyLabs that were run using native database drivers for Advantage Database Server, Microsoft SQL Server, and Borland InterBase running on a Windows NT 4.0 file server. These same tests were also run using ODBC drivers for the above mentioned database engines. The tests were run in multi-user environments of 10, 50, and 100 users.

These seven tests are described as follows:

Test 1 = 20% Seek to a specific record, 80% Skip to next record.

Test 2 = 30% Seek to a specific record 50% Skip to next record, 20% replace non-indexed field.

Test 3 = 40% Seek to a specific record 40% Skip to the next record, 20% replace non-indexed field.

Test 4 = 100% Seek to a specific record.

Test 5 = 100% Skip to the next record.

Test 6 = 100% Replace non-indexed field.

Test 7 = 100% Replace indexed field.

Seek accomplished by SQL Select or AdsSeek() (Advantage API only)

Skip accomplished by Next method of Delphi 3.0 TTable or AdsSkip() (Advantage API only)

Replace Indexed Field and **Replace Non-Indexed Field** accomplished by SQL Update or by the following method for the Advantage API: seek to a specific record using AdsSeek(), set the field value using AdsSetField(), then write data using AdsWriteRecord().

The client test program was created using Delphi 3.0. The tests for InterBase SQL and ODBC, Microsoft SQL and ODBC, and Advantage ODBC all used the same code set made up of standard Delphi components and SQL calls. The Advantage API test was written using Advantage Client Engine functions.

Configurations and Settings

Each Windows 95 client was an HP Vectra 500 Pentium 133 with 16MB of RAM. Client network connections were established using NE2000 network cards.

The Windows NT 4.0 file servers were Micron Intel Pentium 200 Pro machines with 64MB of RAM. Server network connections were established using 3Com 100 Mbit network cards.

Each series of tests were run in six different environments:

1. Microsoft SQL Server 6.5 using native SQL driver.
2. Microsoft SQL Server 6.5 using ODBC driver.
3. Borland InterBase 4.2 using native SQL driver.
4. Borland InterBase 4.2 using ODBC driver.
5. Advantage Database Server 4.3 using Advantage Client Engine API.
6. Advantage Database Server 4.3 using ODBC driver.

All six environments were run against two different data sources, one containing 20,000 records, the other containing 600,000 records.

The table for the tests consisted of the following fields:

Name	Type
First	Char 20
Last	Char 20
Street	Char 30
City	Char 30
State	Char 3
Zip	Char 10
Hire Date	Date/Time
Married	Logical or Numeric 1,0
Age	Numeric 2,0
Salary	Numeric 6,0
Notes	Char 70

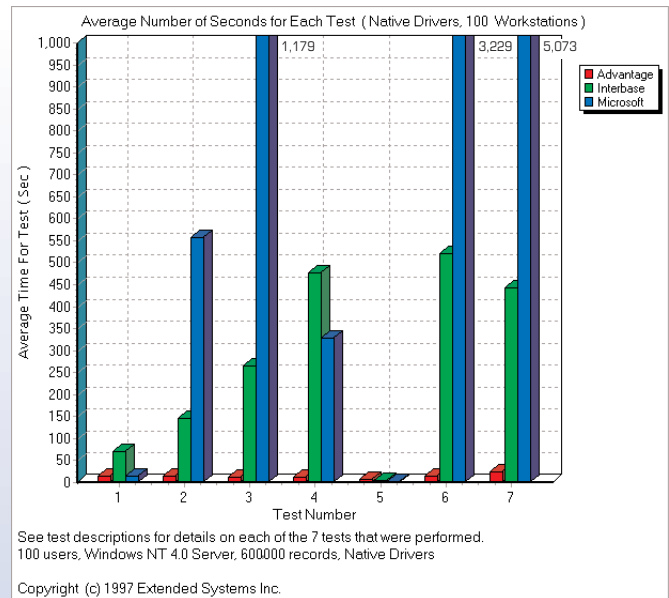
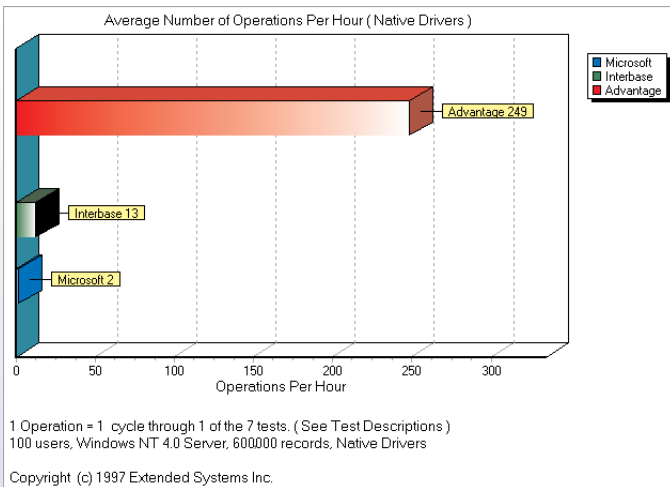
An index containing one field was created on all fields with the exception of Married and Notes.

Test Results

The following graphs depict the benchmark results for the 100 user tests in terms of average number of operations per hour and the time to complete each of the seven benchmark tests.

Native Driver Results

On average, Advantage performed UPDATES 218 times faster than Microsoft SQL Server and 25 times faster than Borland InterBase. SELECTs were performed 29 times faster than Microsoft SQL Server and 43 times faster than Borland InterBase. The performance difference on NEXT operations was negligible.



ODBC Driver Results

On average, Advantage performed UPDATES 85 times faster than Microsoft SQL Server and 8 times faster than Borland InterBase. SELECTs were performed 14 times faster than Microsoft SQL Server and 43 times faster than Borland InterBase. The performance difference on NEXT operations was negligible.

