



# Cache 5

by InterSystems Corporation

Reviewed by  
Mathias Kühn &  
Christian Och

One of the key challenges facing Java developers is that their object-oriented applications use data stored in relational databases. The result: time- and cost-intensive mapping between the two paradigms. InterSystems' Corporation develops and markets a post-relational database management system called Cache that's designed to address this challenge by eliminating the impedance mismatch between objects and tables.

We set out to test the capabilities of this database software from a Java developer's perspective. Working with the latest release of the software, Cache 5, we found the results impressive.

Cache's unique combination of objects and SQL provides a very interesting development framework for object-oriented programmers that goes far beyond what pure relational or pure object-oriented databases provide. Besides eliminating the impedance mismatch between objects and tables, Cache's unified data architecture allows

rapid application development (RAD) of complex systems and applications. With Cache 5, InterSystems delivers a powerful, high-performance, massively scalable database system that supports a plethora of standard protocols, programming languages, and middleware technologies.

## Ready, Set, Go!

For our evaluation, we used the Windows and Linux versions of Cache. In both cases, we used the single-user license that can be freely downloaded from InterSystems' Web site. The installation process took only a few minutes and not even the Windows system had to be restarted. All other tools and technologies are installed along with the database system, and the Web server (Internet Information Server or Apache) is reconfigured to incorporate Cache's Web gateway.

After the installation, we started the Cache Studio (see Figure 1), the development environment used for editing the classes stored in Cache, and immediately began to create some classes. Using the integrated wizards, you can easily create classes with all the features available in Cache. Programming Cache's internal language, ObjectScript, is very easy, especially if you are used to coding in Java or JavaScript. If Visual Basic is your favorite programming lan-

## InterSystems Corporation

Cambridge, MA 02142 USA

**Web:** [www.intersystems.com](http://www.intersystems.com)

**Phone:** 617-621-0600

**E-mail:** [webmaster@intersys.com](mailto:webmaster@intersys.com)

## Specifications

**Platforms:** Windows 95/98/ME, Windows 2000 Pro/2000 Server/2000 Adv. Server, Windows XP Home/Pro, Mac OS X, Linux, HP/UX, Solaris, IBM AIX, Tru64, OpenVMS

**Pricing:** \$200 in a single-user version and starting at \$1,000 for a multi-user configuration

## Test Environment

Notebook ASUS L3800 with Mobile Intel Pentium P4 processor, 40GB disk, 1GB RAM

**Operating Systems:** Windows 2000 Pro with Service Pack 3/SuSE Linux 8.1

guage, you can also use Cache Basic, a close relative to Visual Basic.

## What's Behind the Scenes?

The heart of Cache is its multidimensional data engine with a robust storage system that provides outstanding transactional performance and is capable of serving very large data volumes. Equipped with transactional bitmap indices, queries are evaluated in fractions of a second without sacrificing update and insert performance.

In addition, the multidimensional data model of Cache avoids time-consuming mapping operations between objects and relations because data is natively stored in Cache's multidimensional storage. The Unified Data Architecture (UDA) provides access to the stored data and delivers the necessary metadata information to the relational or object-oriented client. In general, there's no difference if the data is accessed in a relational manner or through objects.

## Cache and Java

Our primary focus was on testing the Java features provided by Cache. With three different ways of connecting to Java, Cache provides optimal support for Java developers and programmers. Data stored within Cache can be accessed with SQL via JDBC, and Cache classes can be projected either as Java classes or as Enterprise JavaBeans. Java developers directly gain data persistence without a lot of tedious coding.

The image shows two screenshots. The top one is a screenshot of the Cache 5 website, featuring a navigation menu with items like Home, About, Features, Downloads, and Support. The main content area has a heading 'Welcome to Cache 5' and lists key features such as 'New Cache 5 Supports Web Services and Real Time Data Analytics' and 'What's new about Cache 5'. The bottom screenshot shows the Cache Studio development environment, which includes a code editor, a class browser, and a console window. The interface is dark-themed and displays various development tools and data views.

