

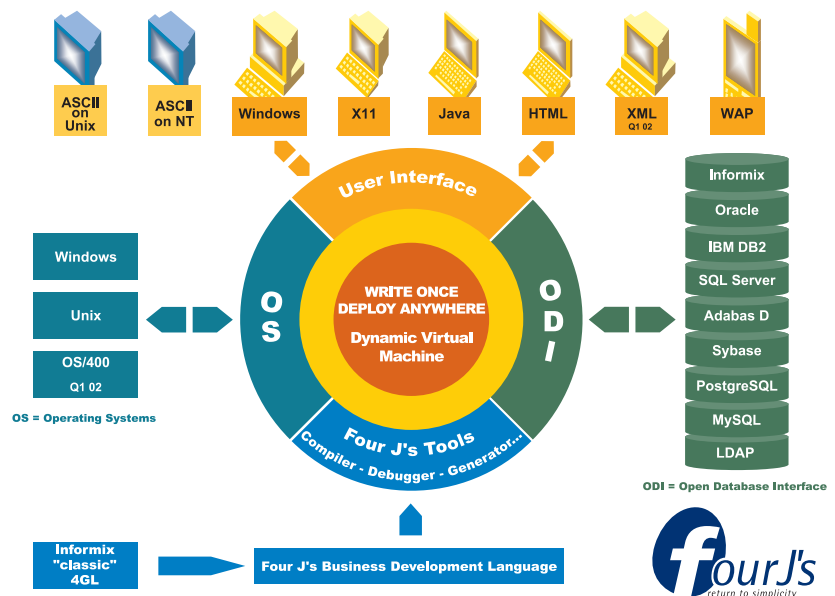
Dynamic Virtual Machine & Compiler Version 3.2

An advanced business oriented compiler for the rapid development of complex, mission-critical applications in small, medium and large enterprises.

In today's economic environment, enterprises need to improve the return on investment of their applications by extending their lifespan. They want to be sure that applications in production today will deliver on the technological benefits of tomorrow, whether they are within the corporate intranet, across the Internet or mobile phone network. This can only be achieved if the tools, with which they are developed, enable existing applications to benefit from new technologies that address these new business models.

Key benefits:

- **Increase competitive edge** - dramatically improve time-to-market for e-commerce or m-commerce applications by re-purposing existing Informix-4GL® applications with the latest user interface standards. Applications may support ASCII, MS-Windows®, Java, HTML and WML interfaces simultaneously.
- **Give customers the database they want** - open your application to support multiple database vendors simultaneously and broaden your market opportunity.
- **Leverage existing skills** - avoid the uncertainty of costly rewrites and retraining of development staff.
- **Reinforce security and improve scalability** - unique thin client, three-tier architecture reduces network bandwidth and penetrates firewalls. Applications run faster than ever before.
- **Write once, deploy anywhere** - reduce testing and deployment costs. One production release supports 18 versions of Unix® and MS-Windows NT®. Smaller executable 'footprint' reduces disk space and time to download applications across wide area networks.



Four J's Universal Compiler responds to this requirement by protecting the most valuable commodity in any software asset - developer time. The logic that faithfully represents an enterprises' business rules and practises, takes man-years to craft and solidify. By separating this business logic from user interface and data access layers, developer time is economized by removing the need to rewrite it. New user interfaces such as HTML, Java™ and WML or access to leading databases from IBM®, Microsoft®, Oracle®, Sybase® etc... may be appended to existing applications without the need to rewrite the business logic. Applications developed with Four J's Universal Compiler move with the times.

Technical highlights:

- An easy to learn, legible and abstract Business Development Language - 100% compatible with Informix-4GL
- Numerous language extensions offer support for graphical user interfaces and multiple, simultaneous database access
- A single portable byte-code executing in a Dynamic Virtual Machine supports a broad range of operating system platforms:
 - Sun® SPARC® Solaris®
 - Data General (Intel®) DG/UX®
 - Digital® UNIX
 - HP HP-UX®
 - IBM AIX®
 - Intel SCO® UNIX
 - Intel Solaris
 - Intel SCO UnixWare®
 - Linux®
 - Sequent® Dynix/PTX
 - Silicon Graphics® IRIX® 6.2
 - MS-Windows NT 4.0 and 2000
- Applications may access concurrently the following end-user clients:
 - Java
 - HTML
 - MS-Windows ('95, '98, NT or 2000)
 - X Windows (X.11)
 - ASCII character terminals
- An Open Database Interface (ODI) supports native access to the following databases for optimum, concurrent access:
 - Adabas® D 12
 - IBM DB2® 7.2
 - Informix® 9, 7, 6, 5, ...
 - Microsoft SQL Server® V 7 and 2000
 - Oracle® 8i and 9i
 - PostgreSQL® 7.x
 - Sybase® 7
 - MySQL 3.x

Write once, deploy anywhere

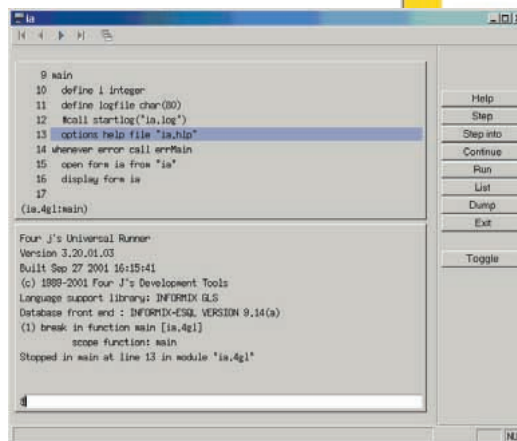
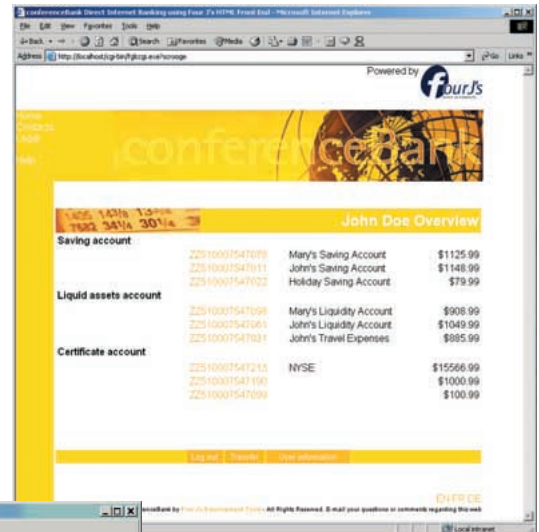
Four J's Universal Compiler is a business oriented development tool that parses Business Development Language (BDL) - a fourth generation graphical programming language - into a portable 'byte-code' available across all leading Unix, MS-Windows NT and 2000 platforms. This approach reduces the size of the executable 'footprint', economizing disk space and enabling production applications to run across any of these operating systems concurrently without the need to recompile. With one source code tree to maintain and test, new releases of an application are published across all platforms simultaneously. As a result, software maintenance across wide area networks is simpler and faster, resulting in lower telecommunications costs.

A simple, productive Business Development Language

The Four J's Business Development Language provides an easy to understand fourth generation grammar - 100% compatible with Informix-4GL® - for developing business logic, database queries and graphical user interfaces. This removes the need for the time consuming practise of programming application infrastructure manually in low-level third generation programming languages. A Dynamic Virtual Machine resolves design considerations that affect scalability such as; "should widgets reside on the client or on the server" . This frees the developer to focus on the real value of the application - programming business rules and practises in a way that provides a competitive advantage to the enterprise.

HTML Front End Version 3.0

Migrating Informix-4GL applications to the Internet has never been easier with this breakthrough release of the HTML Front End client.



Interactive Debugger

This release of the Interactive Debugger now supports real-time source-code scrolling during program execution in a separate text, MS-Windows or HTML client window.

New features in this release:

Business Development Language

- Support for 255 function keys (F1-F255)

The Open Database Interface

New to this release is the integration of the Open Database Interface (ODI) as standard. The ODI provides native access to a broad range of leading databases, improving both reliability and performance. In version 3.2, the ODI architecture has been completely rewritten to provide up to 3 times the throughput over previous releases.

New features of the ODI are as follows:

- Real multiple database connection management. The same BDL program can open several connections to any of the supported databases
- Support for complex data types such as "blobs"
- Optimisation of static SQL with the Informix database interface
- Support for interruption of SQL statement execution
- Support for 'stored procedures' execution (with output parameters)
- Complete support of the CONSTRUCT statement, generating database specific search conditions
- Newly supported Informix emulations:
 - 'Scrollable cursors' for Oracle 9i
 - 'Identity columns' & 'global temporary tables' for DB2 v7.x
- Support for SQL Blocks and Directives enable BDL applications to send any SQL statement to the database server.

Interactive Debugger

Four J's enhances its Interactive Debugger, which builds on the features of the debugger it replaces. This release of the Interactive Debugger now supports real-time source-code scrolling during program execution in a separate text, MS-Windows or HTML client window. Supporting remote debugging across corporate intranets or the Internet, the Interactive Debugger connects directly to the Dynamic Virtual Machine and allows on-site diagnostics of production applications.

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HTML Front End - Version 3.0

(Availability: December 15, 2001)

Migrating Informix-4GL applications to the Internet has never been easier with this breakthrough release of the HTML Front End client.

- Enhanced support for BDL:
 - Field level support
 - Support for the 4GL statement 'PROMPT'
 - Support for the BDL '@' statement for replacing buttons and text labels with pictures
- New e-business BDL library:
 - Configuration access
 - Process control
 - New and enhanced image manipulation routines
 - Direct control over generated HTML & HTTP output
- Enhanced e-business functions through a new architecture and new output modes:
 - New output drivers enable support for HTML, WML, CHTML and DHTML.
 - New layout managers enhance rendering
- New development & test tools:
 - XML & XSL pre-processors
 - CGI tester
- Enhanced dynamic configuration
- Enhanced deployment:
 - Runs as a service for Windows NT / 2000 / XP
- Enhanced scalability:
 - Round Robin mechanism in Application Server Connector allows load balancing across multiple Application Server 'farms'

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