IBM®

IBM Workstation APL2 for Multiplatforms V2 Includes Productivity Enhancements and Linux Support

Overview

APL2® is a programming language used by both developers and interactive end users for application development and problem solving.

Information Technology professionals view APL2 as a highly productive tool for developing both commercial and scientific applications. APL2 is used widely in a diverse set of application areas such as commercial data processing, system design and prototyping, engineering and scientific computation, artificial intelligence, and the teaching of mathematics and other subjects.

End users find APL2 is extremely effective in such diverse areas as "what-if" modeling, exploratory programming, interactive computing, decision support, and data analysis. APL2 easily manages large quantities of data, enabling users to remain focused on solving complex problems.

Workstation APL2 V2 combines the benefits and features of previous workstation APL2 products for AIX®, Solaris, and Windows®. In addition, Workstation APL2 has significant new features including:

- Support for Linux on PC-compatible systems

- Namespaces for application encapsulation and reuse

- Interface to Tcl/Tk command language for platform-independent GUI development

- APL2 Runtime Library for distribution of APL2 applications

- Online documentation in PDF form

Workstation APL2 V2 allows you to create mission-critical, line-of-business applications that can be deployed on both host and workstation systems.

Key Prerequisites

Workstation APL2 V2 requires:

- At least 25 MB of unused disk space

- At least 12 MB of memory

- A computer running one of the following operating systems:

  - AIX

  - Linux for PC compatible machines

  - Sun Solaris

  - Windows 98

  - Windows ME

  - Windows NT®

  - Windows 2000

  - Windows XP

Planned Availability Date

May 3, 2002

Description

IBM APL2 is a highly productive, general-purpose programming language that is useful to application developers and interactive end users. It provides an extensive collection of functions that are quickly combined to solve many business problems. APL2 is widely used in a diverse set of application areas, such as commercial data processing, system design and prototyping, engineering and scientific computation, and the teaching of mathematics and other subjects.

IBM Workstation APL2 V2 enhances workstation APL2 systems to provide increased portability, reusability, and ease of application deployment.

IBM Workstation APL2 V2 runs on the following systems:

- IBM RS/6000® with AIX
- Linux on PC compatible systems
- Sun SPARCstation with Solaris
- Windows+ 98
- Windows ME
- Windows NT+
- Windows 2000
- Windows XP

IBM Workstation APL2 V2 replaces these previous APL2 products:

- AIX APL2/6000® (5765-012)
- APL2 for Sun Solaris (5648-065)
- APL2 for Windows (4229-558)
- APL2 Runtime Environment for Windows (39L8419)
- Mainframe APL2 Workstation Feature (0220)

and adds these new features:

- Support for Linux on PC compatible systems
- Namespaces for application encapsulation and reuse
- Interface to Tcl/Tk command language
- Online documentation in PDF form
- APL2 Runtime Library for distribution of APL2 applications

Highlights of IBM Workstation APL2 V2

Platforms: Support is included for AIX, Linux, Solaris, and Windows.

Namespaces: Namespaces enable workspace encapsulation and reuse with reduced name conflicts. The support for namespaces on work workstations makes feasible development and testing of applications for deployment as mainframe namespaces.

Tcl Interface: The Tcl command language provides a wide variety of routines and extensions including tools for string parsing, file IO, and building GUI. These facilities can be used through the APL2 Tcl interface.

Network Communication: An HTTP 1.1 Web server and clients supporting APL dialect independent remote procedure calls, a TCP/IP socket interface, and cross system shared variables.

Files as Arrays: Manipulate files with APL2 primitive functions and operators.

Object Library: Store APL2 arrays by name. Object files are portable between all APL2 systems.

Relational Database Access: Use the SQL language to access IBM DB2® and databases supporting ODBC.

Universal Graphics: Generate high-quality graphics, text, and images, using a simple command syntax.

Performance Monitor: Analyze APL2 programs to determine performance bottlenecks.

Calls to Other Languages: Call programs written in other languages using normal APL2 syntax.

Tools for Writing Auxiliary Processors: Sample processors, C header files, and a server interface allow for easy implementation of custom processors, including client-server processors.

Large Workspaces: APL2 exploits 32-bit operating systems architecture, allowing workspaces sizes approaching 2 GB.

Application Development Workspaces: Example and utility workspaces are provided which can be used directly or modified for individual needs.

Online Documentation: *The APL2 Users' Guide*, the *APL2 Language Reference Manual*, a Language Summary, *APL2 Programming: Using SQL*, and the *GRAPHPAK User's Guide* are provided online in PDF form.

National Language Support: APL2 accepts system commands and issues messages in several national languages. Unicode data is supported by the Tcl interface and the HTTP server.

Development Environment: Interactive programming is supported through a GUI session manager. On Windows, program, data, and dialog editors are integrated with the session manager.

GUI Applications: On Windows, APL2 provides tools for building GUI applications. This new version adds a grid control that can be used to display tabular data.

What can I use APL2 for?

- Ad hoc data analysis and problem solving, especially when dealing with incomplete data or ill-defined problems
- Interactive program development by, or working closely with, end users
- Building portable applications that need to run on many kinds of systems
- Building advanced decision support systems
- Research and design of new models and decision technologies
- Teaching the computational aspects of applied mathematics

APL2 brings the tools for these tasks together in a single environment. APL2 accomplishes this by combining:

- Rich data structures that are more general and flexible than those provided by most programming languages
- A large set of built-in functions that apply to broad classes of data types
- A simple syntax that treats user-defined programs like built-in language features
- Support for complex arithmetic

- An interactive environment that permits the user to concentrate on a problem without needing to compile or link-edit

- A capability that enables the user to be productive knowing just a small subset of the language

IBM Workstation APL2 V2 provides all these benefits on AIX, Linux, Solaris, and Windows.

Accessibility by People with Disabilities

For software offerings:

The following features support use by people with disabilities:

- Operation by keyboard alone

- Optional font enlargement and high-contrast display settings

Section 508 of the U.S. Rehabilitation Act

The following features support use by people with disabilities:

- Can be operated using only the keyboard

- Supports customization of display attributes such as color, contrast, and font size

Product Positioning

Workstation APL2 for Multiplatform V2 is designed to be compatible with IBM APL2 (program numbers 5688-228 and 5688-229) V2.2, for IBM host mainframe processors.
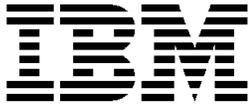
Workstation APL2 can be used to develop applications which can be deployed either on workstations or mainframes.

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Offering Information

Product information will be available on day of announcement through Offering Information (OITOOL) at:

http://www.ibm.com/common/ssi

Publications

IBM Workstation APL2® for Multiplatforms V2 includes the following publication:

APL2 Keyboard Decals   SC33-0604

The following displayable softcopy publications are included in PDF format with IBM Workstation APL2 for Multiplatforms V2.

APL2 User's Guide   SC18-7021
APL2 Programming: Language Reference   SH21-1061
APL2 Programming: Using SQL   SH21-1057
APL2 GRAPHPAK: User's Guide and   SH21-1074
 Reference
APL2 Language Summary   SX26-3851

These manuals are part of the basic machine-readable material. The files are shipped on the same media type as the basic machine-readable material.

Licensed Documentation: No optional priced publications are available for Workstation APL2.

Technical Information

Specified Operating Environment

Hardware Requirements:

- At least 25 MB of unused disk space

- At least 15 MB of memory above that required by the operating system

Software Requirements: Minimum software requirements

- AIX® 3.2.5 (or later) with Motif 1.2 (or later) and X Window System X11R5 (or later)

- A Linux distribution for PC compatible machines with Motif 2.1 (or later) and X Window System X11R5 (or later)

  Note: APL2 has been tested with Caldera OpenLinux Workstation 3.1, Linux-Mandrake 6.1, Red Hat 6.2/7.1, SuSE, 7.1/7.2, and TurboLinux 7.0. It should also run with later releases and other compatible distributions.

- Solaris 2.3 (or later) with Motif 1.3 (or later) and X Window System X11R5 (or later)

- Windows+ 98, Windows® ME, Windows NT+, Windows 2000, or Windows XP

Some features of Workstation APL2 have additional requirements:

- Adobe Acrobat Reader is required to view the online manuals.

- IBM DB2® Universal Database, V5.0 (or later) for AP 127

- An ODBC Driver Manager which supports ODBC 3.0 of Application Programming Interfaces for AP 227

- TCP/IP for AP 119 and cross-system shared variables

- IBM Object REXX for calling REXX routines with Processor 10

- Tcl and Tk 8.1 (or later) for the TCL external function

Compatibility: Workstation APL2 V2 is compatible with AIX APL2/6000®, APL2 for OS/2®, APL2 for Sun Solaris, and APL2 for Windows. Applications written with these products can be run on APL2 V2.

V2 uses a new workspace format. Workspaces saved using V2 cannot be loaded by V1.0 APL2 systems. Workspaces can be migrated back to V1 using the OUT and IN system commands.

Planning Information

Packaging

Each IBM Workstation APL2 for Multiplatforms V2 package contains:

- A CD-ROM containing the Workstation APL2 machine readable-material

- APL2 keyboard decals

- An IBM License Information Booklet

- A Proof of Entitlement (PoE) (Program Package only)

This program, when downloaded from a Web site, contains the applicable IBM license agreement, and License Information (LI), if appropriate and will be presented for acceptance at the time of installation of the program. The license and LI will be stored in a directory such as LICENSE.TXT for future reference.

Ordering Information

IBM Workstation APL2 for Multiplatforms V2 is available either for a new installation or as an upgrade for those customers currently licensed for the following products:

- AIX APL2/6000
- APL2 for OS/2
- APL2 for Sun Solaris
- APL2 for Windows

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.

- Mainframe APL2 Workstation Feature

Program Name/ Description	Part Number
Workstation APL2 PP Client User Eng	45P7514

Program Name/ Description	Part Number
Workstation APL2 V2.0 Eng AIX NetDel	45P8569
Workstation APL2 V2.0 Eng Linux NetDel	45P8570
Workstation APL2 V2.0 Eng Solaris NetDel	45P8571
Workstation APL2 V2.0 Eng Windows NetDel	45P8572

Passport Advantage

Program Name/ Description	Part Number
IBM Workstation APL2 for Multiplatforms V2.0 Media PK Eng	BA04CIE
IBM Workstation APL2 Client User Lic/SW Maint 1 Anniv	D50Z7LL
IBM Workstation APL2 Client User Lic/SW Maint 2 Anniv	D50Z8LL
IBM Workstation APL2 Client User SW Maint Rnwl 1 Anniv	E008MLL
IBM Workstation APL2 Client User SW Maint Aft Lic 1 Anniv	D50Z9LL
Tradeup license and SW maintenance 1 Anniv	D5195LL

Passport Advantage Customer: Media Pack Entitlement Details

Customers with active Maintenance or subscription for the products listed below are entitled to receive the corresponding media pack.

Description	Part Number
Entitled Maintenance Offerings	
IBM Workstation APL2 for Multiplatforms Client	APLMPCLI
Media Pack Description	
IBM Workstation APL2 for Multiplatforms V2.0 Media PK Eng	BA04CIE

Terms and Conditions

Licensing: IBM International Program License Agreement. PoEs are required for all authorized use. Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

This software license includes Software Maintenance, previously referred to as Software Subscription and Technical Support.

License Information Form Number: GC27-1673-00

Limited Warranty Applies: Yes

Program Services: Available until April 30, 2004

Money-Back Guarantee: If for any reason you are dissatisfied with the program, return it within 30 days from the invoice date, to the party (either IBM or its reseller) from whom you acquired it, for a refund. This applies only to your first acquisition of the program.

Copy and Use on Home/Portable Computer: No

Volume Orders (IVO): No

Passport Advantage Applies: Yes and through the Passport Advantage Web site at:

http://www.ibm.com/software/passportadvantage

Usage Restriction: Yes

The following APL2 Runtime modules may be redistributed:

- apl2ar20.installp
- apl2lr20
- apl2lr20.tgz
- apl2sr20
- apl2sr20.tarz
- apl2wr20.exe

No other portions of Workstation APL2 may be redistributed.

Software Maintenance Applies: Yes

Software Maintenance, previously referred to as Subscription and Technical Support, is now included in the Passport Advantage Agreement. Installation and technical support for this program is provided by the Software Maintenance offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice and/or electronic access into the IBM support organizations.

IBM includes Software Maintenance with each program acquired during the Coverage Period. The Coverage Period refers to the period commencing on the date you acquire the program up to the first or second anniversary date, depending on whether you acquired coverage for one or two anniversaries. The Coverage Period for Software Maintenance acquired in the two months preceding an anniversary date will be extended to the next applicable anniversary date.

While your Software Maintenance is in effect: IBM provides you assistance for your (1) routine, short duration installation and usage (how-to) questions; and (2) code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, every day of the year. Consult your *IBM Software Support Guide*

http://techsupport.services.ibm.com/guides/ handbook.html

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For more information about the Passport Advantage Agreement, refer to the IBM International Passport Advantage Agreement Software Announcement 201-202, dated July 10, 2001, or visit the Passport Advantage Web site at:

AIX/UNIX ® ***Upgrade Protection Applies:*** No

Entitled Upgrade for Current AIX/UNIX Upgrade Protection Licensees: No

IBM @server **iSeries Software Subscription Applies:** No

Variable Charges Apply: No

Educational Allowance Available: Not applicable

Prices

Program Name/ Description	Part Number	One- Time Charge
Workstation APL2 PP Client User Eng	45P7514	$1,500
Workstation APL2 V2.0 Eng AIX NetDel	45P8569	1,450
Workstation APL2 V2.0 Eng Linux NetDel	45P8570	1,450
Workstation APL2 V2.0 Eng Solaris NetDel	45P8571	1,450
Workstation APL2 V2.0 Eng Windows NetDel	45P8572	1,450

Passport Advantage

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http://www.ibm.com/software/passportadvantage

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