

APL2

Version 1 Release 3

Dynamic, Adaptable, Interactive

APL2



APL2—Creating a Problem-Solving Environment

APL2 is a high level interactive language that combines rapid prototyping and exceptional productivity with effective production capabilities in a wide range of applications.

The APL2 products add a rich, flexible collection of data structures to the powerful set of operations traditionally associated with APL. The result is a dynamic, problem-solving environment.

While APL2 is well known for applications in engineering and science, it is easily adaptable to areas such as relational data base access, graphics, financial decision modeling, expert system development, scheduling applications and more. IBM offers APL2-based applications such as IC/1 and APE for added productivity gains.

The family of APL2 products includes:

- APL2/PC for workstations
- APL2/370 for mainframe systems
- APL2 Application Environment for running packaged applications on mainframe systems

APL2 Version 1 Release 3
Product Number
5799-PGG APL2/PC
5668-899 APL2 V1R3
5688-003 APL2 Application Environment

For further information see:
IBM APL2 General Information GH20-9214

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Language Compatible

APL2/PC implements a language compatible subset of the full APL2 language found in APL2/370. Since most of the full language features are available, it is possible to run most existing APL2 routines on the workstation.

Full Range PC or PS/2™ * Systems

All PC or PS/2 models—from the IBM PC Convertible through the PS/2 Model 80—can run APL2 programs.

Math Co-Processors

APL2 will use the math co-processor if it is present; otherwise the program provides automatic simulation of the co-processor function.

Cooperative Processing

APL2/PC's communication capabilities allow it to team with mainframe processors to perform cooperative processing applications.

Support for PC Facilities

APL2/PC includes auxiliary processors that provide access to many of the features of the workstation. These range from a BIOS/DOS interrupt handler to a music generator and high-level, full-screen display handler, among others.

Vector Processing Facility Support

APL2 Version 1 Release 3 includes support for the IBM Vector Processing Facility. No program change or recompiling is required to take advantage of this facility. Because APL2 is an array-oriented language, it is well suited to making good use of vector processing. Well written, numerically intensive APL programs may show significant performance gains using the Vector Processing Facility.

Access to Other Languages

By using the name association capability of APL2, the programmer has available functions and subroutines written in several other languages. These include popular languages such as FORTRAN and REXX, plus offerings such as IBM's Engineering and Scientific Subroutine Library (ESSL).

Package Applications

APL2/370 includes the full capabilities of packaging as found in the APL2 Application Environment. This allows applications to be combined without name interference, simplifies their maintenance across the users' organization and provides performance advantages by sharing a single copy among all users.

Access to Host Facilities

The APL2 environment also offers access to various host facilities such as GDDM, ISPF, program editors, access methods and more.

Environments

APL2 may be run using CMS under either VM/SP or VM/XA or using TSO under MVS/SP, MVS/XA or MVS/ESA.

Run-Time Version

APL2 Version 1 Release 3 provides facilities to "package" applications so they may be run under a lower cost run-time facility known as the Application Environment. APL2/AE will provide all usual APL2 services to the application, except those operations used for program development, such as library facilities and program editing.

Package Applications

Application packages for running in the Application Environment may include IBM packages such as PMF or DRAWmaster, packages prepared by other vendors, or programs developed within your own company for running at distributed sites.

VSAPL Migration

For users of VSAPL who are running only packaged applications, the Application Environment provides a cost-effective migration path to take advantage of APL2's Vector Processing Facility support and other advanced programming concepts. Of course, if you wish to develop APL2 application programs, then you should install the full APL2/370 product. Only APL2 will provide support for the new hardware and software environments. Migration from VSAPL to APL2 is usually not difficult, and IBM publications are available to assist the user.

Application Integrity

Use of the Application Environment allows the program developer to take advantage of the power of the APL language, but keeps the details masked from the end user. The user will not have access to the workspace, so the program can not be altered. This increases security, while simplifying user tasks.

