Product Standard

Operating System and Languages:
UNIX 98

The Open Group

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Product Standard

NAME

UNIX 98

LABEL FOR LOGO

UNIX.

When this logo is used on, or in relation to a product registered as conformant to this Product Standard, it must be accompanied by an attribution, in the form defined in the Trademark License Agreement, which includes the UNIX 98 Product Standard name.

DESCRIPTION

The UNIX 98 Product Standard is a significantly enhanced version of the UNIX 95 Product Standard. The mandatory enhancements include:

- Threads interfaces, fully aligned with the POSIX Threads Extension,[1] together with a set of X/Open-defined threads extensions.
- Multibyte Support Extension (MSE), aligned with ISO/IEC 9899:1990/Amendment 1:1995 (E),[2] to further support internationalized applications.
- Large File Support extensions to permit UNIX systems to support files of arbitrary sizes.
- Dynamic Linking extensions to permit applications to share common code.
- Changes to remove hardware data-length dependencies or restrictions. This is known as Data Size Neutral (or N-bit clean). It is of particular relevance to the ongoing move to 64-bit CPUs.
- Year 2000 changes to minimize the impact of the millennium rollover.

In addition, the following optional enhancements are included:

- Software Administration facilities as defined in IEEE Std. 1387.2-1995.[3]
- A defined set of APIs for realtime support, which are aligned with the POSIX Realtime Extension and the 1003.1i technical corrigendum.[4]

1. ANSI/IEEE Std. 1003.1c-1995, incorporated in ISO/IEC 9945-1:1996 (POSIX-1), Information Technology — Portable Operating System Interface (POSIX) — Part 1: System Application Program Interface (API) [C Language] (identical to ANSI/IEEE Std 1003.1-1996).
2. ISO/IEC 9899:1990, Programming Languages — C, including Amendment 1:1995, Multibyte Support Extension (MSE) for ISO C.
3. IEEE Std. 1387.2:1995, Information Technology — Portable Operating System Interface (POSIX) System Administration — Part 2: Software Administration.

CONFORMANCE REQUIREMENTS

A single configuration of the system shall meet all of the conformance requirements defined in the following mandatory Product Standards:

- Internationalized System Calls and Libraries Extended V2
- Commands and Utilities V3
- C Language
- Transport Service (XTI) V2
- Sockets V2
- Internationalized Terminal Interfaces

In addition, it may optionally conform to the Software Administration Product Standard. The Conformance Statement must state whether the product includes this Product Standard.

The product must be registered as conformant to the Product Standards prior to, or concurrent with, the UNIX 98 Product Standard registration.

Except where it would imply the use of language features that require both X/Open Common Usage C and ISO C semantics, a single source program written in X/Open Common Usage C or in ISO C shall be able to use all the services provided by the Portability Interfaces of all those Product Standards.

OPERATIONAL ENVIRONMENT

Refer to the Product Standards listed in **Conformance Requirements**.

PORTABILITY ENVIRONMENT

Refer to the Product Standards listed in **Conformance Requirements**.

OVERRIDING STANDARDS

Refer to the Product Standards listed in **Conformance Requirements**.

INDICATORS OF COMPLIANCE

Refer to the Product Standards listed in **Conformance Requirements**.

MIGRATION

There are very few incompatibility issues in migrating applications from systems registered as conformant to Base 95 or UNIX 95 systems. The few incompatibilities largely arise from alignment with formal international standards. See the **Migration** section of the Product Standards listed in **Conformance Requirements** for more information. Detailed migration information can also be found in Go Solo 2.[5]

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4. ANSI/IEEE Std. 1003.1b-1993 and 1003.1i-1995, incorporated in ISO/IEC 9945-1:1996 (POSIX-1).
5. Go Solo 2, May 1997 (ISBN: 0-13-575689-8, X909P).