

1 / *Technical Standard*

2 **Shell and Utilities, Issue 6**

3 *The Open Group*
4 *The Institute of Electrical and Electronics Engineers, Inc.*

5



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360

361 This document is being jointly developed by the IEEE and The Open Group and is intended to
362 become both IEEE Std. 1003.1-200x and an Open Group Technical Standard, making up the base
363 volumes of the Single UNIX Specification, Version 3.

364 **IEEE Std. 1003.1-200x**

365 IEEE Std. 1003.1-200x defines the Portable Operating System Interface (POSIX) requirements and
366 consists of the following volumes:

- 367 • Base Definitions
- 368 • Shell and Utilities (this volume)
- 369 • System Interfaces

370 **This volume of IEEE Std. 1003.1-200x**

371 The Shell and Utilities volume of IEEE Std. 1003.1-200x describes the commands and utilities
372 offered to application programs on POSIX-conformant systems. Readers are expected to be
373 familiar with the Base Definitions volume of IEEE Std. 1003.1-200x.

374 This volume of IEEE Std. 1003.1-200x is structured as follows:

- 375 • Chapter 1 explains the status of this volume of IEEE Std. 1003.1-200x and its relationship to
376 other formal standards. It also describes the defaults used by the utility descriptions in
377 Chapter 4.
- 378 • Chapter 2 describes the command language used in POSIX-conformant systems.
- 379 • Chapter 4 consists of reference pages for all utilities available on POSIX-conformant systems.

380 Comprehensive references are available in the index.

381 **Typographical Conventions**

382 The following typographical conventions are used throughout IEEE Std. 1003.1-200x:

- 383 • **Bold** font is used in text for options to commands, file names, keywords, type names, data
384 structures, and their members.
- 385 • *Italic* strings are used to denote:
 - 386 — Command operands, command option-arguments, or variable names; for example,
387 substitutable argument prototypes
 - 388 — Environment variables, which are also shown in capitals
 - 389 — Utility names
 - 390 — External variables, such as *errno*
 - 391 — Functions; these are shown as follows: *name()*; names without parentheses are C external
392 variables, C function family names, utility names, command operands, or command
393 option-arguments.
- 394 • The font used here is used for the names of constants and literals.

- 395 • The notation `<file.h>` indicates a header.
- 396 • Names surrounded by braces, for example, `{ARG_MAX}`, represent symbolic limits or
397 configuration values which may be declared in appropriate headers by means of the C
398 `#define` construct.
- 399 • The notation `[EABCD]` is used to identify an error value EABCD.
- 400 • Syntax, code examples, and user input in interactive examples are shown in *fixed width*
401 font. Brackets shown in this font, `[]`, are part of the syntax and do *not* indicate optional
402 items. In syntax the `|` symbol is used to separate alternatives, and ellipses (`...`) are used to
403 show that additional arguments are optional.
- 404 • **Bold fixed width** font is used to identify brackets that surround optional items in syntax,
405 `[]`, and to identify system output in interactive examples.
- 406 • Variables within syntax statements are shown in *italic fixed width* font.
- 407 • Ranges of values are indicated with parentheses or brackets as follows:
 - 408 — (a,b) means the range of all values from a to b , including neither a nor b .
 - 409 — $[a,b]$ means the range of all values from a to b , including a and b .
 - 410 — $[a,b)$ means the range of all values from a to b , including a , but not b .
 - 411 — $(a,b]$ means the range of all values from a to b , including b , but not a .
- 412 • Shading is used to identify extensions; see Section 1.8.1 (on page 2212).

414 Notes to Reviewers

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437 IEEE Std. 1003.1-200x:

438 TBD

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This list needs further work, and should be kept in sync with the XBD, Chapter 1, Normative References section.

Normative References

The following standards contain provisions which, through references in IEEE Std. 1003.1-200x, constitute provisions of IEEE Std. 1003.1-200x. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this volume of IEEE Std. 1003.1-200x are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ANS X3.9-1978

(Reaffirmed 1989) American National Standard for Information Systems: Standard X3.9-1978, Programming Language FORTRAN.

ISO/IEC 646:1991

ISO/IEC 646:1991, Information Technology — ISO 7-Bit Coded Character Set for Information Interchange.

The reference version of the standard contains 95 graphic characters, which are identical to the graphic characters defined in the ASCII coded character set.

ISO 4217:1995

ISO 4217:1995, Codes for the Representation of Currencies and Funds.

ISO/IEC 4873:1991

ISO/IEC 4873:1991, Information Technology — ISO 8-Bit Code for Information Interchange — Structure and Rules for Implementation.

ISO 8601:1988

ISO 8601:1988, Data Elements and Interchange Formats — Information Interchange — Representation of Dates and Times.

ISO/IEC 8859-1:1998

ISO/IEC 8859-1:1998, Information Technology — 8-Bit Single-Byte Coded Graphic Character Sets — Part 1: Latin Alphabet No. 1.

This standard character set comprises 191 graphic characters covering the requirements of most of Western Europe.

ISO 8859-2:1988

ISO 8859-2:1988, Information Processing — 8-bit Single-byte Coded Graphic Character Sets — Part 2: Latin Alphabet No. 2.

ISO C (1999)

ISO/IEC 9899:1999, Programming Languages — C.

ISO POSIX-1:1996

ISO/IEC 9945-1:1996, Information Technology — Portable Operating System Interface

479 (POSIX) — Part 1: System Application Program Interface (API) [C Language] (identical to
480 ANSI/IEEE Std. 1003.1-1996). Incorporating ANSI/IEEE Stds. 1003.1-1990, 1003.1b-1993,
481 1003.1c-1995, and 1003.1i-1995.

482 ISO POSIX-2: 1993

483 ISO/IEC 9945-2: 1993, Information Technology — Portable Operating System Interface
484 (POSIX) — Part 2: Shell and Utilities (identical to IEEE Std. 1003.2-1992 as amended by IEEE
485 Std. 1003.2a-1992).

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