



Man Pages (5): Macros

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Contents

PREFACE v

Intro(5) 2

priv_macros(5) 4

Index 7

PREFACE

Overview

A man page is provided for both the naive user and the sophisticated user who is familiar with the Trusted Solaris operating environment and is in need of online information. A man page is intended to answer concisely the question “What does it do?” The man pages in general comprise a reference manual. They are not intended to be a tutorial.

Trusted Solaris Reference Manual

In the AnswerBook2™ and online man command forms of the man pages, all man pages are available - Trusted Solaris man pages that are unique for the Trusted Solaris environment, SunOS 5.7 man pages that have been changed in the Trusted Solaris environment, and SunOS 5.7 man pages that remain unchanged.

The *Trusted Solaris 7 Reference Manual* is based on the *SunOS 5.7 Reference Manual*. In its printed form, the manual contains man pages that have been added to the SunOS operating system by the Trusted Solaris environment, and man pages that originated in SunOS 5.7, but have been modified in the Trusted Solaris environment to handle security requirements. Users of printed manuals need both manuals in order to have a full set of man pages.

Man Page Sections

The following contains a brief description of each section in the man pages and the information it references:

- Section 1 describes, in alphabetical order, commands available with the operating system.
- Section 1M describes, in alphabetical order, commands that are used chiefly for system maintenance and administration purposes.
- Section 2 describes all of the system calls. Most of these calls have one or more error returns. An error condition is indicated by an otherwise impossible returned value.
- Section 3 describes functions found in various libraries, other than those functions that directly invoke UNIX system primitives, which are described in Section 2 of this volume.
- Section 4 outlines the formats of various files. The C structure declarations for the file formats are given where applicable.
- Section 5 contains miscellaneous documentation such as character set tables.
- Section 6 contains available games and demos.
- Section 7 describes various special files that refer to specific hardware peripherals, and device drivers. STREAMS software drivers, modules and the STREAMS-generic set of system calls are also described.
- Section 9 provides reference information needed to write device drivers in the kernel operating systems environment. It describes two device driver interface specifications: the Device Driver Interface (DDI) and the Driver/Kernel Interface (DKI).
- Section 9E describes the DDI/DKI, DDI-only, and DKI-only entry-point routines a developer may include in a device driver.
- Section 9F describes the kernel functions available for use by device drivers.
- Section 9S describes the data structures used by drivers to share information between the driver and the kernel.

Below is a generic format for man pages. The man pages of each manual section generally follow this order, but include only needed headings. For example, if there are no bugs to report, there is no BUGS section. See the `intro` pages for more information and detail about each section, and `man(1)` for more information about man pages in general.

NAME

This section gives the names of the commands or functions documented, followed by a brief description of what they do.

SYNOPSIS

This section shows the syntax of commands or functions. When a command or file does not exist in the standard path, its full pathname is shown. Options and arguments are alphabetized, with single letter arguments first, and options with arguments next, unless a different argument order is required.

The following special characters are used in this section:

- [] The option or argument enclosed in these brackets is optional. If the brackets are omitted, the argument must be specified.
- . . . Ellipses. Several values may be provided for the previous argument, or the previous argument can be specified multiple times, for example, 'filename...".
- | Separator. Only one of the arguments separated by this character can be specified at time.
- { } Braces. The options and/or arguments enclosed within braces are interdependent, such that everything enclosed must be treated as a unit.

PROTOCOL

This section occurs only in subsection 3R to indicate the protocol description file.

DESCRIPTION

This section defines the functionality and behavior of the service. Thus it describes concisely what the command does. It does not discuss OPTIONS or cite EXAMPLES. Interactive commands, subcommands, requests, macros, functions and such, are described under USAGE.

IOCTL

This section appears on pages in Section 7 only. Only the device class which supplies appropriate parameters to the ioctl (2) system call is called `ioctl` and generates its own heading. `ioctl` calls for a specific device are listed alphabetically (on the man page for that specific device). `ioctl` calls are used for a particular class of devices all of which have an `io` ending, such as `mtio(7D)`

OPTIONS

This lists the command options with a concise summary of what each option does. The options are listed literally and in the order they appear in the SYNOPSIS section. Possible arguments to options are discussed under the option, and where appropriate, default values are supplied.

OPERANDS

This section lists the command operands and describes how they affect the actions of the command.

OUTPUT

This section describes the output - standard output, standard error, or output files - generated by the command.

RETURN VALUES

If the man page documents functions that return values, this section lists these values and describes the conditions under which they are returned. If a function can return only constant values, such as 0 or -1, these values are listed in tagged paragraphs. Otherwise, a single paragraph describes the return values of each function. Functions declared void do not return values, so they are not discussed in RETURN VALUES.

ERRORS

On failure, most functions place an error code in the global variable `errno` indicating why they failed. This section lists alphabetically all error codes a function can generate and describes the conditions that cause each error. When more than one condition can cause the same error, each condition is described in a separate paragraph under the error code.

USAGE

This section is provided as a guidance on use. This section lists special rules, features and commands that require in-depth explanations. The subsections listed below are used to explain built-in functionality:

- Commands
- Modifiers
- Variables
- Expressions
- Input Grammar

EXAMPLES	This section provides examples of usage or of how to use a command or function. Wherever possible a complete example including command line entry and machine response is shown. Whenever an example is given, the prompt is shown as <code>example%</code> or if the user must be root, <code>example#</code> . Examples are followed by explanations, variable substitution rules, or returned values. Most examples illustrate concepts from the SYNOPSIS, DESCRIPTION, OPTIONS and USAGE sections.
ENVIRONMENT VARIABLES	This section lists any environment variables that the command or function affects, followed by a brief description of the effect.
EXIT STATUS	This section lists the values the command returns to the calling program or shell and the conditions that cause these values to be returned. Usually, zero is returned for successful completion and values other than zero for various error conditions.
FILES	This section lists all filenames referred to by the man page, files of interest, and files created or required by commands. Each is followed by a descriptive summary or explanation.
ATTRIBUTES	This section lists characteristics of commands, utilities, and device drivers by defining the attribute type and its corresponding value. See attributes(5) for more information.
SUMMARY OF TRUSTED SOLARIS CHANGES	This section describes changes to a Solaris 7 item by Trusted Solaris. It is present in man pages that have been modified from Solaris 7.
SEE ALSO	This section lists references to other man pages, in-house documentation and outside publications. The references are divided into two sections, so that users of printed manuals can easily locate a man page in its appropriate printed manual.
DIAGNOSTICS	This section lists diagnostic messages with a brief explanation of the condition causing the error.

WARNINGS

This section lists warnings about special conditions which could seriously affect your working conditions. This is not a list of diagnostics.

NOTES

This section lists additional information that does not belong anywhere else on the page. It takes the form of an aside to the user, covering points of special interest. Critical information is never covered here.

BUGS

This section describes known bugs and wherever possible, suggests workarounds.

Headers, Tables, and Macros

NAME	Intro – Introduction to miscellany
DESCRIPTION	<p>Among the topics presented in this section are:</p> <p>Headers The header (.h) files <code>fcntl</code>, <code>floatingpoint</code>, <code>math</code>, <code>langinfo</code>, <code>nl_types</code>, <code>siginfo</code>, <code>signal</code>, <code>stat</code>, <code>stdarg</code>, <code>types</code>, <code>ucontext</code>, <code>values</code>, <code>varargs</code>, and <code>wait</code> (on the <code>wstat</code> page) are described.</p> <p>Environments The user environment (<code>environ</code>), the subset of the user environment that depends on language and cultural conventions (<code>locale</code>), the large file compilation environment (<code>lfcompile</code>), and the transitional compilation environment (<code>lfcompile64</code>) are described.</p> <p>Macros The macros to format Reference Manual pages (<code>man</code> and <code>mansun</code>) as well as other text format macros (<code>me</code>, <code>mm</code>, and <code>ms</code>) are described.</p> <p>Trusted Solaris privilege macros are described.</p> <hr/> <p>Note - The online man pages and AnswerBook2™ man pages display all files: those unchanged from SunOS 5.7, those modified from SunOS 5.7 for Trusted Solaris 7, and those that originate in Trusted Solaris 7.</p> <p>The printed <i>Trusted Solaris 7 Reference Manual</i> includes only those man pages that have been modified or originate in the Trusted Solaris environment. Printed versions of unchanged SunOS 5.7 man pages are found in the <i>SunOS 5.7 Reference Manual</i>.</p> <p>Trusted Solaris terms used on the man pages are defined in the DEFINITIONS section of the Intro(1) and Intro(2) man pages and explained further in the <i>Trusted Solaris User's Guide</i>, the <i>Trusted Solaris Developer's Guide</i> and the <i>Trusted Solaris Administrator's Procedures</i> manuals.</p> <p>Characters Tables of character sets (<code>ascii</code>, <code>charmap</code>, <code>eqnchar</code>, and <code>iconv</code>), file format notation (<code>formats</code>), file name pattern matching (<code>fnmatch</code>), and regular expressions (<code>regex</code> and <code>regexp</code>) are presented.</p> <p>FNS Topics concerning the Federated Naming Service (<code>fns</code>, <code>fns_initial_context</code>, <code>fns_policies</code>, and <code>fns_references</code>) are discussed.</p>

Standards	The POSIX (IEEE) Standards and the X/Open Specifications are described on the standards page .
Name	Description
<code>priv_macros(5)</code>	Test, assign, clear, or store a privilege or privilege set

NAME	priv_macros – Test, assign, clear, or store a privilege or privilege set
SYNOPSIS	<pre>#include <tsol/priv.h> PRIV_ASSERT (<i>priv_set</i>, <i>priv_id</i>) PRIV_ISASSERT (<i>priv_set</i>, <i>priv_id</i>) PRIV_EQUAL (<i>set_a</i>, <i>set_b</i>) PRIV_EMPTY (<i>priv_set</i>) PRIV_FILL (<i>priv_set</i>) PRIV_ISEMPY (<i>priv_set</i>) PRIV_ISFULL (<i>priv_set</i>) PRIV_CLEAR (<i>priv_set</i>, <i>priv_id</i>) PRIV_INTERSECT (<i>set_a</i>, <i>set_b</i>) PRIV_INVERSE (<i>priv_set</i>) PRIV_ISSUBSET (<i>set_a</i>, <i>set_b</i>) PRIV_UNION (<i>set_a</i>, <i>set_b</i>) PRIV_TEST (<i>priv_id</i>, <i>errno</i>) PRIV_XOR (<i>set_a</i>, <i>set_b</i>) priv_set_t *<i>priv_set</i>, *<i>set_a</i>, *<i>set_b</i>; priv_t <i>priv_id</i>;</pre>
DESCRIPTION	<p>PRIV_ASSERT (<i>priv_set</i>, <i>priv_id</i>) asserts the <i>priv_id</i> privilege in the <i>priv_set</i>.</p> <p>PRIV_ISASSERT (<i>priv_set</i>, <i>priv_id</i>) is nonzero if the <i>priv_id</i> privilege in <i>priv_set</i> is asserted; if not, the value is zero.</p> <p>PRIV_EQUAL (<i>set_a</i>, <i>set_b</i>) is true if <i>set_a</i> and <i>set_b</i> are identical.</p> <p>PRIV_EMPTY (<i>priv_set</i>) initializes a <i>priv_set</i> to the null set.</p> <p>PRIV_FILL (<i>priv_set</i>) fills <i>priv_set</i>.</p> <p>PRIV_ISEMPY (<i>priv_set</i>) is nonzero if <i>priv_set</i> is a null set; if not, the value is zero.</p>

`PRIV_ISFULL` (*priv_set*) is nonzero if *priv_set* is a full set; if not, the value is zero.

`PRIV_CLEAR` (*priv_set*, *priv_id*) clears the *priv_id* in *priv_set*.

`PRIV_INTERSECT` (*set_a*, *set_b*) stores the intersection of *set_a* and *set_b* in *set_b*.

`PRIV_INVERSE` (*priv_set*) stores the inverse of *priv_set* in *priv_set*.

`PRIV_ISSUBSET` (*set_a*, *set_b*) is nonzero if all privileges asserted in *set_a* are also asserted in *set_b* (that is, if *set_a* is a subset of *set_b*).

`PRIV_UNION` (*set_a*, *set_b*) stores the union of *set_a* and *set_b* in *set_b*.

`PRIV_TEST` (*priv_id*, *errno*) tests if *priv_id* is asserted in the effective set, and sets *errno* if not.

`PRIV_XOR` (*set_a*, *set_b*) stores the EXCLUSIVE OR of *set_a* and *set_b* in *set_b*.

ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWtsu

ERRORS

The behavior of these macros is undefined if *priv_id* is less than one or greater than the constant `MAX_PRIV`.

SEE ALSO

Trusted Solaris 7
Reference Manual
SunOS 5.7 Reference
Manual

`getppriv(2)`, `setppriv(2)`

`attributes(5)`

Index
