Red Hat Enterprise Linux Release 9.2 Manual Pages on 'su.1' command

$ man su.1

SU(1)   User Commands   SU(1)

NAME

    su - run a command with substitute user and group ID

SYNOPSIS

    su [options] [-] [user [argument...]]

DESCRIPTION

    su allows commands to be run with a substitute user and group ID.

    When called with no user specified, su defaults to running an

    interactive shell as root. When user is specified, additional arguments

    can be supplied, in which case they are passed to the shell.

    For backward compatibility, su defaults to not change the current

    directory and to only set the environment variables HOME and SHELL

    (plus USER and LOGNAME if the target user is not root). It is

    recommended to always use the --login option (instead of its shortcut

    -) to avoid side effects caused by mixing environments.

    This version of su uses PAM for authentication, account and session

    management. Some configuration options found in other su

    implementations, such as support for a wheel group, have to be

    configured via PAM.

    su is mostly designed for unprivileged users, the recommended solution

    for privileged users (e.g., scripts executed by root) is to use

    non-set-user-ID command runuser(1) that does not require authentication

    and provides separate PAM configuration. If the PAM session is not

required at all then the recommended solution is to use command setpriv(1).

Note that su in all cases uses PAM (pam_getenvlist(3)) to do the final environment modification. Command-line options such as --login and --preserve-environment affect the environment before it is modified by PAM.

OPTIONS

-c, --command=command

Pass command to the shell with the -c option.

-f, --fast

Pass -f to the shell, which may or may not be useful, depending on the shell.

-g, --group=group

Specify the primary group. This option is available to the root user only.

-G, --supp-group=group

Specify a supplementary group. This option is available to the root user only. The first specified supplementary group is also used as a primary group if the option --group is not specified.

-, -l, --login

Start the shell as a login shell with an environment similar to a real login:

? clears all the environment variables except TERM and variables specified by --whitelist-environment

? initializes the environment variables HOME, SHELL, USER, LOGNAME, and PATH

? changes to the target user?s home directory

? sets argv[0] of the shell to '-' in order to make the shell a login shell

-m, -p, --preserve-environment

Preserve the entire environment, i.e., do not set HOME, SHELL, USER or LOGNAME. This option is ignored if the option --login is specified.

-P, --pty

    Create a pseudo-terminal for the session. The independent terminal

    provides better security as the user does not share a terminal with

    the original session. This can be used to avoid TIOCSTI ioctl

    terminal injection and other security attacks against terminal file

    descriptors. The entire session can also be moved to the background

    (e.g., "su --pty - username -c application &"). If the

    pseudo-terminal is enabled, then su works as a proxy between the

    sessions (copy stdin and stdout).

    This feature is mostly designed for interactive sessions. If the

    standard input is not a terminal, but for example a pipe (e.g.,

    echo "date" | su --pty), then the ECHO flag for the pseudo-terminal

    is disabled to avoid messy output.

-s, --shell=shell

    Run the specified shell instead of the default. The shell to run is

    selected according to the following rules, in order:

    ?   the shell specified with --shell

    ?   the shell specified in the environment variable SHELL, if the

       --preserve-environment option is used

    ?   the shell listed in the passwd entry of the target user

    ?   /bin/sh

If the target user has a restricted shell (i.e., not listed in

/etc/shells), the --shell option and the SHELL environment variables

are ignored unless the calling user is root.

--session-command=command

    Same as -c, but do not create a new session. (Discouraged.)

-w, --whitelist-environment=list

    Don?t reset the environment variables specified in the

    comma-separated list when clearing the environment for --login. The

    whitelist is ignored for the environment variables HOME, SHELL,

    USER, LOGNAME, and PATH.

-V, --version

    Display version information and exit.

-h, --help

   Display help text and exit.

SIGNALS

   Upon receiving either SIGINT, SIGQUIT or SIGTERM, su terminates its

   child and afterwards terminates itself with the received signal. The

   child is terminated by SIGTERM, after unsuccessful attempt and 2

   seconds of delay the child is killed by SIGKILL.

CONFIG FILES

   su reads the /etc/default/su and /etc/login.defs configuration files.

   The following configuration items are relevant for su:

   FAIL_DELAY (number)

      Delay in seconds in case of an authentication failure. The number

      must be a non-negative integer.

   ENV_PATH (string)

      Defines the PATH environment variable for a regular user. The

      default value is /usr/local/bin:/bin:/usr/bin.

   ENV_ROOTPATH (string), ENV_SUPATH (string)

      Defines the PATH environment variable for root. ENV_SUPATH takes

      precedence. The default value is

      /usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin.

   ALWAYS_SET_PATH (boolean)

      If set to yes and --login and --preserve-environment were not

      specified su initializes PATH.

      The environment variable PATH may be different on systems where

      /bin and /sbin are merged into /usr; this variable is also affected

      by the --login command-line option and the PAM system setting

      (e.g., pam_env(8)).

EXIT STATUS

   su normally returns the exit status of the command it executed. If the

   command was killed by a signal, su returns the number of the signal

   plus 128.

   Exit status generated by su itself:

   1

Generic error before executing the requested command

126

The requested command could not be executed

127

The requested command was not found

FILES

/etc/pam.d/su

default PAM configuration file

/etc/pam.d/su-l

PAM configuration file if --login is specified

/etc/default/su

command specific logindef config file

/etc/login.defs

global logindef config file

NOTES

For security reasons, su always logs failed log-in attempts to the btmp

file, but it does not write to the lastlog file at all. This solution

can be used to control su behavior by PAM configuration. If you want to

use the pam_lastlog(8) module to print warning message about failed

log-in attempts then pam_lastlog(8) has to be configured to update the

lastlog file as well. For example by:

session required pam_lastlog.so nowtmp

HISTORY

This su command was derived from coreutils' su, which was based on an

implementation by David MacKenzie. The util-linux version has been

refactored by Karel Zak.

SEE ALSO

setpriv(1), login.defs(5), shells(5), pam(8), runuser(1)

REPORTING BUGS

For bug reports, use the issue tracker at

https://github.com/karelzak/util-linux/issues.

AVAILABILITY

The su command is part of the util-linux package which can be