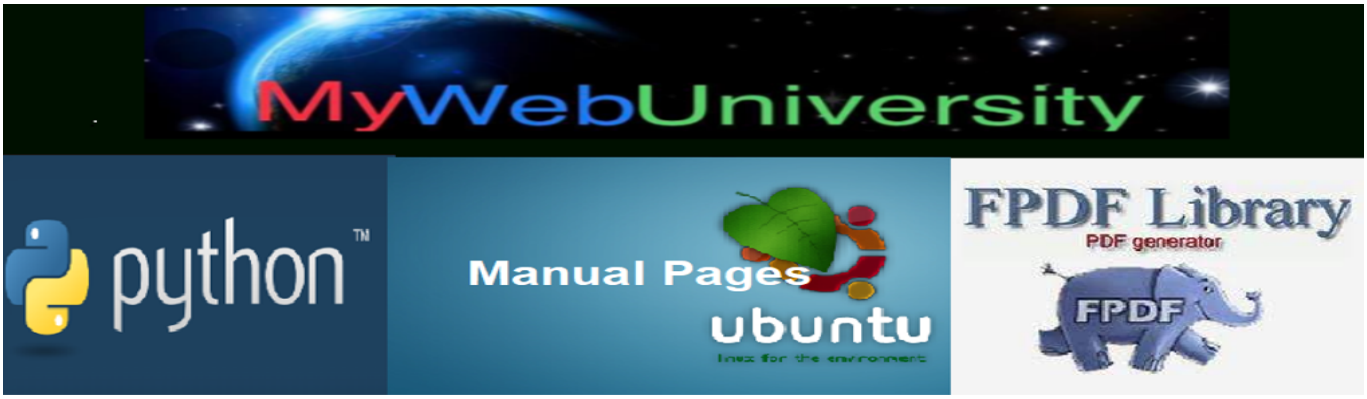

Rocky Enterprise Linux 9.2 Manual Pages on command 'saned.8'

$ man saned.8

saned(8) SANE Scanner Access Now Easy saned(8)

NAME

saned - SANE network daemon

SYNOPSIS

saned [-a [username]] [-u username] [-b address] [-p port] [-l] [-D] [-o]

[-d n] [-e] [-h]

DESCRIPTION

saned is the SANE (Scanner Access Now Easy) daemon that allows remote clients to access image acquisition devices available on the local host.

OPTIONS

saned recognises the following options:

-a [username], --alone[=username]

is equivalent to the combination of -l -D -u username options. However, username is optional and running user will only be set when specified.

-u username, --user=username

requests that saned drop root privileges and run as the user (and group) associated with username after binding.

-b address, --bind=address

tells saned to bind to the address given.

-p port, --port=port

tells saned to listen on the port given. A value of 0 tells saned to pick an un? used port. The default is the sane-port (6566).

-l, --listen

requests that saned run in standalone daemon mode. In this mode, saned will listen for incoming client connections; inetd(8) is not required for saned operations in this mode.

-D, --daemonize

will request saned to detach from the console and run in the background.

-o, --once

requests that saned exits after the first client disconnects. This is useful for debugging.

-d n, --debug=n

sets the level of saned debug output to n. When compiled with debugging enabled, this flag may be followed by a number to request more or less debug info. The larger the number, the more verbose the debug output. E.g., -d128 will request output of all debug info. A level of 0 produces no output at all. The default value is 2.

-e, --stderr

will divert saned debug output to stderr instead of the syslog default.

-h, --help

displays a short help message.

If saned is run from other programs such as inetd(8), xinetd(8) and systemd(1), check that program's documentation on how to pass command-line options.

CONFIGURATION

First and foremost: saned is not intended to be exposed to the internet or other non-trusted networks. Make sure that access is limited by tcpwrappers and/or a firewall setup. Don't depend only on saned's own authentication. Don't run saned as root if it's not nec? essary. And do not install saned as setuid root.

The saned.conf configuration file contains both options for the daemon and the access list.

data_portrange = min_port - max_port

Specify the port range to use for the data connection. Pick a port range between 1024 and 65535; don't pick a too large port range, as it may have performance is? sues. Use this option if your saned server is sitting behind a firewall. If that firewall is a Linux machine, we strongly recommend using the Netfilter nf_con? ntrack_sane module instead.

data_connect_timeout = timeout

Specify the time in milliseconds that saned will wait for a data connection. With? out this option, if the data connection is not done before the scanner reaches the end of scan, the scanner will continue to scan past the end and may damage it de? pending on the backend. Specify zero to have the old behavior. The default is 4000ms.

The access list is a list of host names, IP addresses or IP subnets (CIDR notation) that are permitted to use local SANE devices. IPv6 addresses must be enclosed in brackets, and should always be specified in their compressed form. Connections from localhost are always permitted. Empty lines and lines starting with a hash mark (#) are ignored. A line con? taining the single character ``+'' is interpreted to match any hostname. This allows any remote machine to use your scanner and may present a security risk, so this shouldn't be used unless you know what you're doing.

A sample configuration file is shown below:

```
# Daemon options
data_portrange = 10000 - 10100
# Access list
scan-client.somedomain.firm
# this is a comment
192.168.0.1
192.168.2.12/29
[::1]
[2001:db8:185e::42:12]/64
```

The case of the host names does not matter, so AHost.COM is considered identical to ahost.com.

SERVER DAEMON CONFIGURATION

For saned to work properly in its default mode of operation, it is also necessary to add the appropriate configuration for xinetd(8), inetd(8) or systemd(1) (see below). Note that your inetd(8) must support IPv6 if you want to connect to saned over IPv6; xinetd(8), openbsd-inetd(8) and systemd(1) are known to support IPv6, check the documentation for your inetd(8) daemon.

In the sections below the configuration for inetd(8), xinetd(8) and systemd(1) are de? scribed in more detail.

For the configurations below it is necessary to add a line of the following form to /etc/services:

```
sane-port 6566/tcp # SANE network scanner daemon
```

The official IANA short name for port 6566 is "sane-port". The older name "sane" is now deprecated.

INETD CONFIGURATION

It is required to add a single line to the inetd(8) configuration file (/etc/inetd.conf)

The configuration line normally looks like this:

```
sane-port stream tcp nowait saned.saned /usr/sbin/saned saned
```

However, if your system uses tcpd(8) for additional security screening, you may want to disable saned access control by putting ``+'' in saned.conf and use a line of the follow? ing form in /etc/inetd.conf instead:

```
sane-port stream tcp nowait saned.saned /usr/sbin/tcpd /usr/sbin/saned
```

Note that both examples assume that there is a saned group and a saned user. If you fol? low this example, please make sure that the access permissions on the special device are set such that saned can access the scanner (the program generally needs read and write ac? cess to scanner devices).

XINETD CONFIGURATION

If xinetd(8) is installed on your system instead of inetd(8) the following example for /etc/xinetd.conf may be helpful:

```
# default: off
# description: The sane server accepts requests
# for network access to a local scanner via the
# network.
service sane-port
{
  port        = 6566
  socket_type = stream
  wait        = no
  user        = saned
  group       = saned
  server      = /usr/sbin/saned
}
```

SYSTEMD CONFIGURATION

saned can be compiled with explicit systemd(1) support. This will allow logging debugging information to be forwarded to the systemd(1) journal. The systemd(1) support requires compilation with the systemd-devel package installed on the system. This is the preferred option.

saned can be used with systemd(1) without the systemd(1) integration compiled in, but then logging of debug information is not supported.

The systemd(1) configuration is different for the 2 options, so both are described below.

Systemd configuration for saned with systemd support compiled in

For systemd(1) configuration we need to add 2 configuration files in /etc/systemd/system.

The first file we need to add here is called saned.socket. It shall have the following contents:

```
[Unit]
Description=saned incoming socket
[Socket]
ListenStream=6566
Accept=yes
MaxConnections=1
[Install]
WantedBy=sockets.target
```

The second file to be added is saned@.service with the following contents:

```
[Unit]
Description=Scanner Service
Requires=saned.socket
[Service]
ExecStart=/usr/sbin/saned
User=saned
Group=saned
StandardInput=null
StandardOutput=syslog
StandardError=syslog
Environment=SANE_CONFIG_DIR=/etc/sane.d
# If you need to debug your configuration uncomment the next line and
```

change it as appropriate to set the desired debug options

Environment=SANE_DEBUG_DLL=255 SANE_DEBUG_BJNP=5

[Install]

Also=saned.socket

You need to set an environment variable for SANE_CONFIG_DIR pointing to the directory where saned can find its configuration files. You will have to remove the # on the last line and set the variables for the desired debugging information if required. Multiple variables can be set by separating the assignments by spaces as shown in the example above.

Unlike xinetd(8) and inetd(8), systemd(1) allows debugging output from backends set using SANE_DEBUG_XXX to be captured. See the man-page for your backend to see what options are supported. With the service unit as described above, the debugging output is forwarded to the system log.

Systemd configuration when saned is compiled without systemd support

This configuration will also work when saned is compiled WITH systemd(1) integration sup? port, but it does not allow debugging information to be logged.

For systemd(1) configuration for saned, we need to add 2 configuration files in /etc/sys? temd/system.

The first file we need to add here is called saned.socket. It is identical to the version for systemd(1) with the support compiled in. It shall have the following contents:

[Unit]

Description=saned incoming socket

[Socket]

ListenStream=6566

Accept=yes

MaxConnections=1

[Install]

WantedBy=sockets.target

The second file to be added is saned@.service. This one differs from the version with systemd(1) integration compiled in:

[Unit]

Description=Scanner Service

Requires=saned.socket

[Service]

ExecStart=/usr/sbin/saned

User=saned

Group=saned

StandardInput=socket

Environment=SANE_CONFIG_DIR=/etc/sane.d

[Install]

Also=saned.socket

FILES

/etc/hosts.equiv

The hosts listed in this file are permitted to access all local SANE devices.

Caveat: this file imposes serious security risks and its use is not recommended.

/etc/sane.d/saned.conf

Contains a list of hosts permitted to access local SANE devices (see also descrip?

tion of SANE_CONFIG_DIR below).

/etc/sane.d/saned.users

If this file contains lines of the form

user:password:backend

access to the listed backends is restricted. A backend may be listed multiple times

for different user/password combinations. The server uses MD5 hashing if supported

by the client.

ENVIRONMENT

SANE_CONFIG_DIR

This environment variable specifies the list of directories that may contain the

configuration file. On *NIX systems, the directories are separated by a colon

(`:'), under OS/2, they are separated by a semi-colon (`;'). If this variable is

not set, the configuration file is searched in two default directories: first, the

current working directory (".") and then in /etc/sane.d. If the value of the envi?

ronment variable ends with the directory separator character, then the default di?

rectories are searched after the explicitly specified directories. For example,

setting SANE_CONFIG_DIR to "/tmp/config:" would result in directories tmp/config,

., and /etc/sane.d being searched (in this order).

SEE ALSO

sane(7), scanimage(1), xscanimage(1), xcam(1), sane-dll(5), sane-net(5), sane-"backend?

name"(5), inetd(8), xinetd(8), systemd(1)

http://www.penguin-breeder.org/?page=sane-net

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