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

\$ man sudo_logsrvd.8

SUDO_LOGSRVD(8) BSD System Manager's Manual SUDO_LOGSRVD(8)

NAME

sudo_logsrvd ? sudo event and I/O log server

SYNOPSIS

sudo_logsrvd [-hnV] [-f file] [-R percentage]

DESCRIPTION

sudo_logsrvd is a high-performance log server that accepts event and I/O logs from sudo. It can be used to implement centralized logging of sudo logs. The server has two modes of operation: local and relay. By default, sudo_logsrvd stores the logs locally but it can also be configured to relay them to another server that supports the sudo_logsrv.proto(5) protocol.

When not relaying, event log entries may be logged either via syslog(3) or to a local file.

I/O Logs stored locally by sudo_logsrvd can be replayed via the sudoreplay(8) utility in the same way as logs generated directly by the sudoers plugin.

The server also supports restarting interrupted log transfers. To distinguish completed I/O logs from incomplete ones, the I/O log timing file is set to be read-only when the log is complete.

Configuration parameters for sudo_logsrvd may be specified in the sudo_logsrvd.conf(5) file or the file specified via the -f option.

sudo_logsrvd rereads its configuration file when it receives SIGHUP and writes server state to the debug file (if one is configured) when it receives SIGUSR1.

The options are as follows:

-f file, --file=file

Read configuration from file instead of the default, /etc/sudo_logsrvd.conf.

-h, --help Display a short help message to the standard output and exit.

-n, --no-fork

Run sudo_logsrvd in the foreground instead of detaching from the terminal and becoming a daemon.

-R percentage, --random-drop=percentage

For each message, there is a percentage chance that the server will drop the connection. This is only intended for debugging the ability of a client to restart a connection.

-V, --version

Print the sudo_logsrvd version and exit.

Securing server connections

The I/O log data sent to sudo_logsrvd may contain sensitive information such as passwords and should be secured using Transport Layer Security (TLS). Doing so requires having a signed certificate on the server and, if `tls_checkpeer` is enabled in `sudo_logsrvd.conf(5)`, a signed certificate on the client as well.

The certificates can either be signed by a well-known Certificate Authority (CA), or a private CA can be used. Instructions for creating a private CA are included below in the EXAMPLES section.

Debugging sudo_logsrvd

sudo_logsrvd supports a flexible debugging framework that is configured via `Debug` lines in the `sudo.conf(5)` file.

For more information on configuring `sudo.conf(5)`, please refer to its manual.

FILES

/etc/sudo.conf Sudo front-end configuration

/etc/sudo_logsrvd.conf Sudo log server configuration file

/var/log/sudo_logsrvd/incoming

Directory where new journals are stored when the `store_first` relay setting is enabled.

/var/log/sudo_logsrvd/outgoing

Directory where completed journals are stored when the `store_first` relay setting is enabled.

/var/log/sudo-io Default I/O log file location

```
/run/sudo/sudo_logsrvd.pid
```

Process ID file for sudo_logsrvd

EXAMPLES

Creating self-signed certificates

Unless you are using certificates signed by a well-known Certificate Authority (or a local enterprise CA), you will need to create your own CA that can sign the certificates used by sudo_logsrvd, sudo_sendlog, and the sudoers plugin. The following steps use the openssl(1) command to create keys and certificates.

Initial setup

First, we need to create a directory structure to store the files for the CA. We'll create a new directory hierarchy in /etc/ssl/sudo for this purpose.

```
# mkdir /etc/ssl/sudo
# cd /etc/ssl/sudo
# mkdir certs csr newcerts private
# chmod 700 private
# touch index.txt
# echo 1000 > serial
```

The serial and index.txt files are used to keep track of signed certificates.

Next, we need to make a copy of the openssl.conf file and customize it for our new CA. The path to openssl.cnf is system-dependent but /etc/ssl/openssl.cnf is the most common location. You will need to adjust the example below if it has a different location on your system.

```
# cp /etc/ssl/openssl.cnf .
```

Now edit the openssl.cnf file in the current directory and make sure it contains ?ca? and ?CA_default? sections. Those sections should include the following settings:

```
[ ca ]
default_ca = CA_default

[ CA_default ]
dir          = /etc/ssl/sudo
certs       = $dir/certs
database    = $dir/index.txt
certificate  = $dir/cacert.pem
serial      = $dir/serial
```

If your openssl.conf file already has a ?CA_default? section, you may only need to modify the ?dir? setting.

Creating the CA key and certificate

In order to create and sign our own certificates, we need to create a private key and a certificate for the root of the CA. First, create the private key and protect it with a pass phrase:

```
# openssl genrsa -aes256 -out private/cakey.pem 4096
# chmod 400 private/cakey.pem
```

Next, generate the root certificate, using appropriate values for the site-specific fields:

```
# openssl req -config openssl.cnf -key private/cakey.pem \
  -new -x509 -days 7300 -sha256 -extensions v3_ca \
  -out cacert.pem
```

Enter pass phrase for private/cakey.pem:

You are about to be asked to enter information that will be incorporated into your certificate request.

What you are about to enter is what is called a Distinguished Name or a DN.

There are quite a few fields but you can leave some blank.

For some fields there will be a default value,

If you enter '.', the field will be left blank.

Country Name (2 letter code) [AU]:US

State or Province Name (full name) [Some-State]:Colorado

Locality Name (eg, city) []:

Organization Name (eg, company) [Internet Widgits Pty Ltd]:sudo

Organizational Unit Name (eg, section) []:sudo Certificate Authority

Common Name (e.g., server FQDN or YOUR name) []:sudo Root CA

Email Address []:

```
# chmod 444 cacert.pem
```

Finally, verify the root certificate:

```
# openssl x509 -noout -text -in cacert.pem
```

Creating and signing certificates

The server and client certificates will be signed by the previously created root CA. Us?

ally, the root CA is not used to sign server/client certificates directly. Instead, intermediate certificates are created and signed with the root CA and the intermediate certs are used to sign CSRs (Certificate Signing Request). In this example we'll skip this part for simplicity's sake and sign the CSRs with the root CA.

First, generate the private key without a pass phrase.

```
# openssl genrsa -out private/logsrvd_key.pem 2048
# chmod 400 private/logsrvd_key.pem
```

Next, create a certificate signing request (CSR) for the server's certificate. The organization name must match the name given in the root certificate. The common name should be either the server's IP address or a fully qualified domain name.

```
# openssl req -config openssl.cnf -key private/logsrvd_key.pem -new \
  -sha256 -out csr/logsrvd_csr.pem
```

Enter pass phrase for private/logsrvd_key.pem:

You are about to be asked to enter information that will be incorporated into your certificate request.

What you are about to enter is what is called a Distinguished Name or a DN.

There are quite a few fields but you can leave some blank.

For some fields there will be a default value,

If you enter '.', the field will be left blank.

Country Name (2 letter code) [AU]:US

State or Province Name (full name) [Some-State]:Colorado

Locality Name (eg, city) []:

Organization Name (eg, company) [Internet Widgits Pty Ltd]:sudo

Organizational Unit Name (eg, section) []:sudo log server

Common Name (e.g., server FQDN or YOUR name []):logserver.example.com

Email Address []:

Please enter the following 'extra' attributes

to be sent with your certificate request

A challenge password []:

An optional company name []:

Now sign the CSR that was just created:

```
# openssl ca -config openssl.cnf -days 375 -notext -md sha256 \  
-in csr/logsvrd_csr.pem -out certs/logsvrd_cert.pem
```

Using configuration from openssl.cnf

Enter pass phrase for ./private/cakey.pem:

Check that the request matches the signature

Signature ok

Certificate Details:

Serial Number: 4096 (0x1000)

Validity

Not Before: Nov 11 14:05:05 2019 GMT

Not After : Nov 20 14:05:05 2020 GMT

Subject:

countryName = US

stateOrProvinceName = Colorado

organizationName = sudo

organizationalUnitName = sudo log server

commonName = logserve.example.com

X509v3 extensions:

X509v3 Basic Constraints:

CA:FALSE

Netscape Comment:

OpenSSL Generated Certificate

X509v3 Subject Key Identifier:

4C:50:F9:D0:BE:1A:4C:B2:AC:90:76:56:C7:9E:16:AE:E6:9E:E5:B5

X509v3 Authority Key Identifier:

keyid:D7:91:24:16:B1:03:06:65:1A:7A:6E:CF:51:E9:5C:CB:7A:95:3E:0C

Certificate is to be certified until Nov 20 14:05:05 2020 GMT (375 days)

Sign the certificate? [y/n]:y

1 out of 1 certificate requests certified, commit? [y/n]y

Write out database with 1 new entries

Data Base Updated

Finally, verify the new certificate:

```
# openssl verify -CAfile cacert.pem certs/logsvrd_cert.pem
```

certs/logsrvd_cert.pem: OK

The /etc/ssl/sudo/certs directory now contains a signed and verified certificate for use with sudo_logsrvd.

To generate a client certificate, repeat the process above using a different file name.

Configuring sudo_logsrvd to use TLS

To use TLS for client/server communication, both sudo_logsrvd and the sudoers plugin need to be configured to use TLS. Configuring sudo_logsrvd for TLS requires the following settings, assuming the same path names used earlier:

```
# Listen on port 30344 for TLS connections to any address.
```

```
listen_address = *:30344(tls)
```

```
# Path to the certificate authority bundle file in PEM format.
```

```
tls_cacert = /etc/ssl/sudo/cacert.pem
```

```
# Path to the server's certificate file in PEM format.
```

```
tls_cert = /etc/ssl/sudo/certs/logsrvd_cert.pem
```

```
# Path to the server's private key file in PEM format.
```

```
tls_key = /etc/ssl/sudo/private/logsrvd_key.pem
```

The root CA cert (cacert.pem) must be installed on the system running sudo_logsrvd. If peer authentication is enabled on the client, a copy of cacert.pem must be present on the client system too.

SEE ALSO

sudo.conf(5), sudo_logsrvd.conf(5), sudoers(5), sudo(8), sudo_sendlog(8), sudoreplay(8)

AUTHORS

Many people have worked on sudo over the years; this version consists of code written primarily by:

Todd C. Miller

See the CONTRIBUTORS file in the sudo distribution (<https://www.sudo.ws/contributors.html>) for an exhaustive list of people who have contributed to sudo.

BUGS

If you feel you have found a bug in sudo_logsrvd, please submit a bug report at <https://bugzilla.sudo.ws/>

SUPPORT

Limited free support is available via the sudo-users mailing list, see

<https://www.sudo.ws/mailman/listinfo/sudo-users> to subscribe or search the archives.

DISCLAIMER

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