

System Log Rotation Service (SLRS)

Standard Operating Procedures Under SunOS 5.x

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Executive Summary

The System Log Rotation Service (SLRS) is a tool that automates rotation of collected system log files. The tool is both flexible and customizable. By automatically maintaining system log files you prevent these logs from filling up their respective data partitions and you facilitate the organization and management of this valuable systems administration information resource. An additional benefit is that all included systems and their managed log files are now found in one place. This can be a big help when troubleshooting obscure system or network problems.

This document contains sufficient detail so that it should allow a junior to mid-level Unix system administrator to set up and maintain SLRS for managing their system log management needs. Any extensive modifications will require some script programming experience.

Introduction

Introduction

This document provides standard operating procedures for a series of programs, collectively known as the System Log Rotation Service (SLRS), used to rotate Unix system logs. SLRS has been written using Bourne shell commands over the past 10 years by the author. It functions in an autonomous manner to maintain generic operating system and application generated log files. The distribution includes the rotation script; several daemon notification scripts and an input file containing a list of common Solaris system log files.

SLRS is based on the premise that, in general, the rotation of a log file should be triggered when the size of the monitored log file matches or exceeds a definable threshold. When the rotation service executes on a daily basis, requirements mandating a periodic rotation can be easily met¹. The utility also provides the following capabilities on a per log file basis:

- ?? A unique definable size threshold.
- ?? If enabled, automatic compression of the rotated log file.
- ?? Self-purging of the rotated log file when the age of the rotated file exceeds a definable limit.
- ?? Daemon tickling/notification when the log file is rotated.
- ?? An ability to bypassing the rotation on defined hosts.
- ?? Definable protections on the rotated log files.
- ?? Definable destinations for the rotated log files.

The list of monitored log files is controlled via a single text input file that is read by the rotation service script. Changes to the list of monitored log files are accomplished by editing this input file.

Utilization of a single service to rotate system and application log files helps to optimize the following:

- ?? A list of log files on the system can be found in one place. This helps in the maintenance of a system by providing a single reference location to begin tracking problems. (This is highly beneficial a system is prone to running out of disk space as logs fill up.)
- ?? Insures that these log files are examined on a regular basis.

¹ To trigger a daily rotation, a threshold size of zero bytes can be set. Then, if the rotation script is executed daily, a log equal to or exceeding this threshold would rotate.

- ?? Use of a single analysis script to control the rotation of all log files can help reduce the overall resources consumed through the elimination of multiple scripts to perform this same function.

Approach

The installation processes for SLRS is based on the standard Solaris “package add” function. The installation process will automatically disable the default log rotation scripts found in root’s cron table following a generic Solaris install and will add itself to this same table for daily execution.

The following steps define the installation process:

1. Pre-installation requirements and considerations
2. Service installation.
3. Customizing the List Of Monitored Log Files.

Conventions Used

User entries are **boldfaced**. *Italics* are used for emphasis and pre-defined values.

This procedure applies only to SLRS as installed under SunOS 5.x. The utility has been shown to run equally well under both SPARC and X86 hardware architectures.

This document assumes that the base directory containing these tools is available. An appendix has been included providing installation instructions for those systems that will not have access to existing installations (e.g., stand-alone).

All scripts *must* be installed and run as `root`.

Part 1: Pre-Installation Requirements And Considerations

This section provides pre-installation requirements and considerations that must be addressed prior to installation of SLRS. Sufficient disk space resources must be available before the rotation process will function correctly.

Table 1 provides the basic hardware and software requirements for SLRS.

Table 1. Minimal Hardware and Software For The Server	
Hardware	Software
?? Log file Minimum Disk Space: Five times the estimated requirement for one days worth of logs ² .	?? While this utility will run under older versions of SunOS, Version 5.5.1 or later is recommended. This utility uses only the Bourne Shell. ?? GNU's Gzip 1.2.4a or later is highly recommended. To obtain gzip, see the GNU web site at: http://www.gnu.org .

Hardware.

Since SLRS will be responsible for rotating system log files, sufficient space needs to be available for the proper management of the rotated files.

Disk Space. Observation has shown that under normal operational conditions, a busy system will consume approximately 10 MB worth of new disk space for its log files over a 24-hour period. Following log file rotation, observation has also shown compression via GNU's Gzip has reduced the space consumed by the rotated logs to around 1 MB. Given this level of compression, approximately one month's worth of compressed rotated files could be stored within a 30 MB area.

Under the standard Solaris configuration, log files are collected in the `/var` partition. By default, this same partition is also used by SLRS to house the rotated log files (in `/var/adm/oldlogs`). As a consequence, `/var` must be large enough to hold both the

² For example, if the system adds around 10 MB worth of messages to the log files within a 24-hour period, at least 50 MB of disk space needs to be available on the system. Plan on allocating twice the estimated input to the partitions containing the active log files and at least three times the estimated input to the partition containing the rotated/compressed log files

active log files and the retained rotated log files. Should less space than the recommended levels be available under `/var`, and no other space be available elsewhere on the system, retention periods for the rotated log files can be reduced to accommodate what space is available.

By default, SLRS will install in the `/opt` partition. As distributed, its installation size is less than 1 MB.

Software.

The SLRS utility is written entirely in Bourne shell commands. While the standard Solaris operating environment is sufficient to run the SLRS, GNU's Gzip utility is highly recommended for file compression.

If SLRS finds `/usr/local/bin/gzip`, it will use `gzip` to perform the compression. If it does not, SLRS will use the standard Unix `compress` command. Observation has shown compressions rates of 90% when `gzip` is used and 75% when `compress` is used. As a consequence, which compression tool is used must be taken into consideration when planning the size of the rotated log file partition and the retention periods.

How SLRS Works.

Entries are created in the SLRS input file for each log file to be monitored. When SLRS executes, it reads each entry in turn from the input file. If the log file associated with the entry has a size that exceeds the specified threshold, a rotation is performed. When a log file is rotated, it is copied³ into the destination directory and renamed in such a way as to include the date (year, month, day and hour) as part of the rotated log file's name. Then, the file is compressed. Once compression is completed, rotated log files created previously are examined to determine if their age exceeds the specified purge threshold. If the age of the rotated log file does exceed this threshold, it is deleted.

³ SLRS actually creates a hard link to the log file, removes the original log file name, creates a replacement log file by the original log file name and then notifies the daemon using the log file that a change has occurred. Following the daemon notification, the old log file is moved to the destination directory. In this way, any logs actively being written at the point of the rotation will be maintained.

Part 2: Service Installation

This section provides instructions for installing SLRS. It has been converted into a Solaris package to facilitate installation.

The steps required are summarized as follows:

- ?? Access the package repository
- ?? Installing the utility
- ?? Verifying the installation
- ?? Dismount repository

See Appendix A for a sample from an actual SLRS installation. In the example, the default installation directory was chosen.

It should be noted that SLRSpkg is used in the following steps to designate the name of the SLRS package.

1. Log into the system as `root`.
2. Insure the directory containing the SLRS package is available and mounted. Change the default directory to the directory containing the SLRS package.
3. Using the `pkgadd` command, add the SLRS package.

```
prompt ---: pkgadd -d <SLRSpkg.pkg>
```

```
where: <SLRSpkg.pkg> is the SLRS package file name
```

4. The `pkgadd` utility will display a preamble listing available packages. Only SLRS should be listed. Enter the word **all** and press return to continue.

```
The following packages are available:
```

```
 1 SLRSpkg      System Log Rotation Service
      (none) 1.0
```

```
Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]: all
```

```
Processing package instance <SLRSpkg> from <SLRSpkg.pkg>
```

```
System Log Rotation Service
(none) 1.0
```

5. The pkgadd utility will display its public license:

```
#
# System Log Rotation Service (SLRS)
# Copyright (C) 1998-2002 James A. Finegan and
# The MITRE Corporation
#
# This utility is free software; you can redistribute it and/or
# modify it under the terms of the GNU Lesser General Public
# License as published by the Free Software Foundation; either
# version 2.1 of the License, or (at your option) any later version.
#
# This utility is distributed in the hope that it will be useful,
# but WITHOUT ANY WARRANTY; without even the implied warranty of
# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
# Lesser General Public License for more details.
#
# You should have received a copy of the GNU Lesser General Public
# License along with this utility; if not, write to the Free Software
# Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
#
```

6. When queried, select whether or not to change the default installation directory. While the default is recommended as the installed standard, if an alternate location is desired, it can be entered. This procedure assumes the default installation location.

```
=====
=====

By default, this utility will install itself under </opt/SLRSpkg>

Change the base directory (n) [y,n,?,q] n
```

7. When queried, select whether or not to create links from SLRS to the /opt/local directory. These links facilitate use of the SLRS application. (This allows the sys-admin to specify /opt/local/bin in their path thereby gaining access to the SLRS executables.) While the default is recommended as the installed standard, creation of these links can be bypassed. This procedure assumes the default action is taken.

```
You are root. Please answer the following layout questions

The tree /opt/local can be created to facilitate finding these utilities
(e.g., add /opt/local/bin to your path).

Create /opt/local tree (y) [y,n,?,q] y
```

8. When queried, select whether or not to change the default rotation directory. (This is the name of the directory into which log files are rotated.) While the default is recommended as the installation standard, if an alternate location is desired, it can be entered. This procedure assumes the default installation location

```
=====
=====
```

```
By default, rotated logs are stored under /var/adm/oldlog

Change the destination (n) [y,n,?,q] n
```

9. When queried, select whether or not to have the default installation directory created. Installation will abort if anything but “y” is entered.

```
The selected base directory </opt/SLRSpkg> must exist before
installation is attempted.

Do you want this directory created now [y,n,?,q] y
Using </opt/SLRSpkg> as the package base directory.
```

10. A series of configuration messages will now be displayed. In addition, a message will be displayed indicating that several pathnames already exist. Finally a query will be displayed asking whether or not installation should continue.

```
## Processing package information.
## Processing system information.
   6 package pathnames are already properly installed.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.

This package contains scripts which will be executed with super-user
permission during the process of installing this package.

Do you want to continue with the installation of <SLRSpkg> [y,n,?] y
```

11. The installation will now proceed without asking any more questions. When done, a message indicating successful installation will be displayed.

```
Installing System Log Rotation Service as <SLRSpkg>
.
.   A whole bunch of messages
.
Installation of <SLRSpkg> was successful.
```

12. As a check, display root’s cron table. Both the Solaris standard logchecker and newsyslog should be commented out. In addition, the last entry within the file should be for *rotate_logfiles*. These lines are shown in italics.

```
prompt ---: crontab -l
#ident "@(#)root      1.19   98/07/06 SMI" /* SVr4.0 1.1.3.1   */
#
# The root crontab should be used to perform accounting data collection.
#
# The rtc command is run to adjust the real time clock if and when
# daylight savings time changes.
#
#10 3 * * 0,4 /etc/cron.d/logchecker
#10 3 * * 0   /usr/lib/newsyslog
```

```
15 3 * * 0 /usr/lib/fs/nfs/nfsfind
1 2 * * * [ -x /usr/sbin/rtc ] && /usr/sbin/rtc -c > /dev/null 2>&1
30 3 * * * [ -x /usr/lib/gss/gsscred_clean ] && /usr/lib/gss/gs..
#
10 2 * * * /opt/<SLRSpkg>/bin/rotate_logfiles > /tmp/rotate.log 2>&1
#      Executing log rotation script as cron job
```

13. If `logchecker` or `newsyslog` were non-standard entries within `root`'s cron table, they may not have been deactivated. If not, use the `crontab -e` command to disable these tasks. You can also use the `crontab` command to change when the log rotation utility is executed.

```
prompt ---: crontab -e
```

14. Return to the root partition and dismount the package repository.

```
prompt ---: cd /
prompt ---: umount /mnt
```

15. Log off the system.

Part 3: Customizing the List of Monitored Log Files

This section provides instructions for customizing the list of log files monitored by SLRS.

As before, SLRSpkg is used to designate the name of the SLRS package.

1. Log in as `root`.
2. Using your favorite editor, edit the input file for SLRS. By default, this file is installed in `/opt/<SLRSpkg>/etc`.

```
prompt ---: cd /opt/<SLRSpkg>/etc
prompt ---: vi loglist_Solaris
```

3. Log off the system.

Each log file monitored is given a separate entry. Each entry uses the following format:

```
<log>:<size>:<exclude>:<age>:<destdir>:<prot>:<restart>:<comp>:<traceback>
```

The contents of each field above are described in Table 2. The colon (:) is used as the field separator. *Do not use tabs within this file.* Comment lines begin with the pound sign. See Appendix B for a sample of this file.

Table 2. The SLRS Input File	
Field	Definition
log	Fully qualified path name of the log file to be monitored.
size	Size, in bytes, at which the specified log is to be rotated. If a value of zero is entered, the log file will be rotated each time the rotation script executes.
exclude	Systems on which rotation is NOT to be performed separated by underscore (_) character, with an underscore character on the last entry (e.g. xx_ or xx_yy_) or the word "NONE". This is most useful when multiple systems are using a common log file and only specific systems are supposed to rotate that log file.
age	When the rotated files exceed this age (in days), the file will be purged.
destdir	Fully qualified path name of the directory, and the first part of the rotated log file name, which will be used to hold rotated data. The utility will automatically add a tag field based on the year, month and date.
prot	File protections for new log and rotated file. Value is specified in <code>chmod</code> numeric format (e.g., 644 or 600).

Table 2. The SLRS Input File

Field	Definition
restart	Fully qualified path for any applicable restart command/scripts or the word "NONE". The restart command/script is executed to notify the daemon filling the log file that there has been a change. This is often referred to as "tickling" the daemon..
comp	Compress file after rotate ("true" or "false"). If <code>/usr/local/bin/gzip</code> exists, it will be used. Otherwise, Unix standard <code>compress</code> command is used.
traceback	Create link to active file from rotation directory ("true" or "false"). This link enables an individual to go to the destination directory and see not only the rotated compress log files but also the active log file.

Appendix A: Sample Installation

This section provides a sample installation of SLRS.

```
prompt ---: mount server:/export/packages /mnt
prompt ---: cd /mnt
prompt ---: pkgadd -d GNUslrs.pkg
```

The following packages are available:

```
1 GNUslrs      System Log Rotation Service
                (none) 1.0
```

Select package(s) you wish to process (or 'all' to process all packages). (default: all) [?,??,q]: **all**

Processing package instance GNUslrs from /mnt/GNUslrs.pkg

System Log Rotation Service
(none) 1.0

```
#
# System Log Rotation Service (SLRS)
# Copyright (C) 1998-2002 James A. Finegan and
# The MITRE Corporation
#
# This utility is free software; you can redistribute it and/or
# modify it under the terms of the GNU Lesser General Public
# License as published by the Free Software Foundation; either
# version 2.1 of the License, or (at your option) any later version.
#
# This utility is distributed in the hope that it will be useful,
# but WITHOUT ANY WARRANTY; without even the implied warranty of
# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
# Lesser General Public License for more details.
#
# You should have received a copy of the GNU Lesser General Public
# License along with this utility; if not, write to the Free Software
# Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA
#
```

```
=====
=====
```

By default, this utility will install itself under /opt/GNUslrs

Change the base directory (n) [y,n,?,q] **n**

You are root. Please answer the following layout questions

The tree /opt/local can be created to facilitate finding these utilities (e.g., add /opt/local/bin to your path).

Create /opt/local tree (y) [y,n,?,q] **y**

```
=====
=====
```

By default, rotated logs are stored under /var/adm/oldlog

Change the destination (n) [y,n,?,q] n

The selected base directory /opt/GNUslrs must exist before installation is attempted.

Do you want this directory created now [y,n,?,q] y

Using /opt/GNUslrs as the package base directory.

Processing package information.

Processing system information.

6 package pathnames are already properly installed.

Verifying disk space requirements.

Checking for conflicts with packages already installed.

Checking for setuid/setgid programs.

This package contains scripts which will be executed with super-user permission during the process of installing this package.

Do you want to continue with the installation of GNUslrs [y,n,?] y

Installing System Log Rotation Service as GNUslrs

Executing preinstall script.

```
*****  
*****  
***  
***                UNIX System Administration Utility Package                ***  
***  
*****  
*****
```

```
Utility Name:                /var/sadm/pkg/GNUslrs/install/preinstall  
Utility Description:         Pre-Install System Logfile Rotation Service  
                             Utility  
Utility Version:             1.0  
Utility Release Date:        03 Mar 2002
```

```
Task Start Time:             Mon Mar  4 12:03:16 EDT 2002  
Host System Name:            myhost  
Operating system:            SunOS 5.8  
Operating system patch level: Generic_108528-12  
System hardware implementation: SUNW,Ultra-5_10  
System host ISA / processor: sparc
```

Cleaning up old installations of /opt/GNUslrs...

Pre-install task(s) done...

Installing part 1 of 1.

```
/opt/GNUslrs/COPYING  
/opt/GNUslrs <implied directory>  
/opt/GNUslrs/bin/restart_automountd  
/opt/GNUslrs/bin/restart_cron  
/opt/GNUslrs/bin/restart_flog  
/opt/GNUslrs/bin/restart_httpd  
/opt/GNUslrs/bin/restart_inetd  
/opt/GNUslrs/bin/restart_sshd  
/opt/GNUslrs/bin/restart_syslog  
/opt/GNUslrs/bin/restart_va  
/opt/GNUslrs/bin/restart_vold  
/opt/GNUslrs/bin/restart_xntpd
```

```
/opt/GNUslrs/bin/rotate_logfiles
/opt/GNUslrs/bin/set_globals_dist
/opt/GNUslrs/doc/slrs_v10.pdf
/opt/GNUslrs/etc/loglist_Hpux
/opt/GNUslrs/etc/loglist_Hpux_dist
/opt/GNUslrs/etc/loglist_Solaris
/opt/GNUslrs/etc/loglist_Solaris_dist
/opt/slrs <symbolic link>
/opt/slrs-1.0 <symbolic link>
[ verifying class <base> ]
/opt/local/bin/restart_automountd <symbolic link>
/opt/local/bin/restart_cron <symbolic link>
/opt/local/bin/restart_flog <symbolic link>
/opt/local/bin/restart_httpd <symbolic link>
/opt/local/bin/restart_inetd <symbolic link>
/opt/local/bin/restart_sshd <symbolic link>
/opt/local/bin/restart_syslog <symbolic link>
/opt/local/bin/restart_vold <symbolic link>
/opt/local/bin/restart_xntpd <symbolic link>
/opt/local/bin/rotate_logfiles <symbolic link>
/opt/local/bin/set_globals <symbolic link>
/opt/local/bin/set_globals_dist <symbolic link>
/opt/local/etc/loglist_Solaris <symbolic link>
/opt/local/etc/loglist_Solaris_dist <symbolic link>
[ verifying class <opt> ]
## Executing postinstall script.
*****
*****
***
***          UNIX System Administration Utility Package          ***
***
*****
*****

Utility Name:                /var/sadm/pkg/GNUslrs/install/postinstall
Utility Description:         Post-Install System Logfile Rotation Service
                             Utility
Utility Version:             1.0
Utility Release Date:       03 Mar 2002

Task Start Time:            Mon Mar  4 12:03:22 EDT 2002
Host System Name:           mybox
Operating system:           SunOS 5.8
Operating system patch level: Generic_108528-12
System hardware implementation: SUNW,Ultra-5_10
System host ISA / processor: sparc

Editing base and destination directory into config files...
Checking for destination directory...
  Destination /var/adm/oldlog already exists as a directory...
Disabling Solaris standard log rotation crontab entries...
Setting up to run rotate script from cron
Tickling cron daemon...
Post-install task(s) done...

Installation of GNUslrs was successful.
prompt ---:  crontab -l
#ident "@(#)root      1.19   98/07/06 SMI" /* SVr4.0 1.1.3.1   */
#
# The root crontab should be used to perform accounting data collection.
#
```

```
# The rtc command is run to adjust the real time clock if and when
# daylight savings time changes.
#
#10 3 * * 0,4 /etc/cron.d/logchecker
#10 3 * * 0 /usr/lib/newsyslog
15 3 * * 0 /usr/lib/fs/nfs/nfsfind
1 2 * * * [ -x /usr/sbin/rtc ] && /usr/sbin/rtc -c > /dev/null 2>&1
30 3 * * * [ -x /usr/lib/gss/gsscred_clean ] && /usr/lib/gss/gsscred_clean
#
10 2 * * * /opt/GNUsrls/bin/rotate_logfiles > /tmp/rotate.log 2>&1
#      Executing log rotation script as cron job
prompt ---:  cd /
prompt ---:  umount /mnt
```

Appendix B: System Logs Monitored by SLRS

This section provides a copy of the default input file used by SLRS. This file contains the list of log files monitored. Wrapping after the first field (the name of the monitored log file) has been added to improve readability.

```
#
# Common separated Generic Solaris syslog generated log files
# =====
/var/adm/log/messages.alert :005000:NONE:90:
  /var/adm/oldlog/mssg_ar:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.all :005000:NONE:01:
  /var/adm/oldlog/mssg_al:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.auth :050000:NONE:31:
  /var/adm/oldlog/mssg_au:640:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.crit :010000:NONE:31:
  /var/adm/oldlog/mssg_cr:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.debug :000001:NONE:07:
  /var/adm/oldlog/mssg_db:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.emerg :005000:NONE:90:
  /var/adm/oldlog/mssg_em:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.err :010000:NONE:31:
  /var/adm/oldlog/mssg_er:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.info :005000:NONE:01:
  /var/adm/oldlog/mssg_in:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.local :010000:NONE:01:
  /var/adm/oldlog/mssg_lo:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.mail :050000:NONE:01:
  /var/adm/oldlog/mssg_ml:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.notice :001000:NONE:01:
  /var/adm/oldlog/mssg_no:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages.warning :050000:NONE:01:
  /var/adm/oldlog/mssg_wa:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
#
# Common separated syslog-ng generated log files
# =====
/var/adm/log/messages_auth.log :005000:NONE:31:
  /var/adm/oldlog/mssg_au:640:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_syslog.log :005000:NONE:14:
  /var/adm/oldlog/mssg_sl:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_cron.log :005000:NONE:14:
  /var/adm/oldlog/mssg_cr:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_daemon.log :005000:NONE:14:
  /var/adm/oldlog/mssg_dm:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_kern.log :005000:NONE:14:
  /var/adm/oldlog/mssg_kr:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_lpr.log :005000:NONE:01:
  /var/adm/oldlog/mssg_lp:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_user.log :005000:NONE:07:
  /var/adm/oldlog/mssg_us:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_uucp.log :005000:NONE:01:
  /var/adm/oldlog/mssg_uu:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_mail.log :005000:NONE:01:
```

```
    /var/adm/oldlog/mssg_ml:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_mail.info  :005000:NONE:01:
    /var/adm/oldlog/mssg_mi:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_mail.warn  :005000:NONE:14:
    /var/adm/oldlog/mssg_mw:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_mail.err   :005000:NONE:14:
    /var/adm/oldlog/mssg_me:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/log/messages_debug.log  :000001:NONE:07:
    /var/adm/oldlog/mssg_db:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
#
# Common Solaris /var/log log files
# =====
/var/log/sudo.log :100000:NONE:90:
    /var/adm/oldlog/sudo_log:600:NONE:true:false:
/var/log/syslog   :500000:NONE:01:
    /var/adm/oldlog/sslg_log:666:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/log/authlog  :100000:NONE:90:
    /var/adm/oldlog/auth_log:600:NONE:true:false:
/var/log/messages :100000:NONE:90:
    /var/adm/oldlog/auth_log:600:NONE:true:false:
/var/log/xferlog  :100000:NONE:90:
    /var/adm/oldlog/auth_log:600:NONE:true:false:
#
# Common Solaris /var/adm log files
# =====
/var/adm/aculog   :050000:NONE:14:
    /var/adm/oldlog/aculog:644:NONE:true:false:
/var/adm/loginlog :100000:NONE:90:
    /var/adm/oldlog/messages:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/messages :100000:NONE:01:
    /var/adm/oldlog/messages:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/sulog    :100000:NONE:31:
    /var/adm/oldlog/sulog:644:/opt/<SLRSpkg>/bin/restart_syslog:true:false:
/var/adm/vold.log :100000:NONE:14:
    /var/adm/oldlog/voldlog:666:/opt/<SLRSpkg>/bin/restart_vold:true:false:
#
# Common Solaris /var/adm/log log files
# =====
/var/adm/log/asppp.log :010000:NONE:07:
    /var/adm/oldlog/asppp:666:NONE:true:false:
#
# Common Solaris /var/lp log files
# =====
/var/lp/logs/lpsched :500000:NONE:07:
    /var/adm/oldlog/lpsc_log:600:NONE:true:false:
/var/lp/logs/requests :500000:NONE:07:
    /var/adm/oldlog/lprq_log:600:NONE:true:false:
#
# Common Solaris Virtual Adrian log files
# =====
/var/adm/sa/monitor.log :500000:NONE:07:
    /var/adm/oldlog/cronlog:600:/opt/<SLRSpkg>/bin/restart_cron:true:false:
#
# Common Solaris /var/cron log files
# =====
/var/cron/log :250000:NONE:07:
    /var/adm/oldlog/cronlog:600:/opt/<SLRSpkg>/bin/restart_cron:true:false:
#
# Common Solaris/Sendmail log files
# =====
/etc/mail/sendmail.st :000001:NONE:07:
```

```
    /var/adm/oldlog/sendmail_stat:640:NONE:true:false:
#
# Apache Log Server Logs (Solaris 8)
# =====
/var/apache/logs/access_log:065536:NONE:03:
    /var/adm/oldlog/apache_access:640:/opt/<SLRSpkg>/bin/restart_httpd:true:false:
/var/apache/logs/error_log:065536:NONE:03:
    /var/adm/oldlog/apache_error:640:/opt/<SLRSpkg>/bin/restart_httpd:true:false:
/var/apache/logs/mod_jserv.log:065536:NONE:03:
    /var/adm/oldlog/apache_jserv:640:/opt/<SLRSpkg>/bin/restart_httpd:true:false:
/var/apache/logs/suexec_log:065536:NONE:03:
    /var/adm/oldlog/apache_exec:640:/opt/<SLRSpkg>/bin/restart_httpd:true:false:
#
# Misc Solaris log files
# =====
/var/saf/zsmon/log:016000:NONE:14:
    /var/adm/oldlog/zsmon_log:640:NONE:true:false:
/var/saf/_log:016000:NONE:14:
    /var/adm/oldlog/saf_log:640:NONE:true:false:
/var/log/ab2/logs/access-8888.log:000500:NONE:03:
    /var/adm/oldlog/ab_access:640:NONE:true:false:
/var/log/ab2/logs/errors-8888.log:000500:NONE:03:
    /var/adm/oldlog/ab_errors:640:NONE:true:false:
/var/log/ab2/logs/main-8888.log:000500:NONE:03:
    /var/adm/oldlog/ab_main:640:NONE:true:false:
/var/log/ab2/logs/pid-8888.log:000500:NONE:03:
    /var/adm/oldlog/ab_pid:640:NONE:true:false:
```