

```

=====
Thu 09 May 2024 20:43:07 - sadmlib_std_demo.py v3.23 - Library v4.54
Demonstrate functions & variables available to developers using SADMIN Tools
sherlock.maison.ca - User: root - Umask: 0002 - Arch: x86_64
Redhat Linux v9.4 - Kernel 5.14.0-427.13.1.el9_4.x86_64 - SADMIN(S): /opt/sadmin
=====

```

User var. that affect SADMIN behavior	Description	This system result
[001] pver	Program version number	: 3.23
[002] sa.pn	Program name	: sadmlib_std_demo.py
[003] sa.pinst	Program name without extension	: sadmlib_std_demo
[004] sa.pusername	Current user name	: root
[005] sa.ppid	Current Process ID	: 2733865
[006] sa.multiple_exec	Allow running multiple copy	: Y
[007] sa.use_rch	Generate entry in .rch file	: False
[008] sa.log_type	Set Output to [S]creen [L]og [B]oth	: B
[009] sa.log_append	Append to log(True), New log=(False)	: False
[010] sa.log_header	Generate header in log	: True
[011] sa.log_footer	Generate footer in log	: True
[012] sa.pexit_code	Script Exit Return Code	: 0
[013] sa.proot_only	Script can only be run by root	: False
[014] sa.psadm_server_only	Script can only run on SADMIN server	: False

Calling Functions	Description	This System Result
[001] sa.get_release()	SADMIN Release Number (XX.XX)	: 1.4.2 Beta
[002] sa.get_ostype()	OS Type (Uppercase,LINUX,AIX,DARWIN)	: LINUX
[003] sa.get_osversion()	Return O/S Version (Ex: 7.2, 6.5)	: 9.4
[004] sa.get_osmajorversion()	Return O/S Major Version (Ex 7, 6)	: 9

```

[005] sa.get_osminorversion()      Return O/S Minor Version (Ex 2, 3) : 4
[006] sa.get_osname()              O/S Name (REDHAT,CENTOS,UBUNTU,...) : REDHAT
[007] sa.get_oscodename()          O/S Project Code Name             : N/A
[008] sa.get_kernel_version()      O/S Running Kernel Version        : 5.14.0-427.13.1.el9_4.x86_64
[009] sa.get_kernel_bitmode()      O/S Kernel Bit Mode (32 or 64)    : 64
[010] sa.phostname                  Current Host Name                   : sherlock
[011] sa.get_host_ip()              Current Host IP Address             : 192.168.1.48
[012] sa.get_domainname()          Current Host Domain Name           : maison.ca
[013] sa.get_fqdn()                 Fully Qualified Domain Host Name   : sherlock.maison.ca
[014] sa.get_serial()               Get System serial Number
[015] sa.get_epoch_time()           Get Current Epoch Time             : 1715301787
[016] sa.epoch_to_date(1715301787) Convert epoch time to date         : 2024.05.09 20:43:07
      WDATE=2024.05.09 20:43:07
[017] sa.date_to_epoch(WDATE)       Convert Date to epoch time         : 1715301787
      DATE1 is End date/time : 2018.06.30 10:00:44
      DATE2 is Start date/time : 2018.06.30 10:00:03
[018] sa.elapse_time(DATE1,DATE2)   Elapse Time between two timestamps : 00:00:41
[019] sa.get_packagetype()          Get package type (rpm,deb,aix,dmg) : rpm
[020] sa.get_arch()                 Get system architecture            : x86_64
[021] sa.lock_system(hostname)      Lock specified host, monitoring off : True
[022] sa.check_system_lock(hostname) Check if host specified is lock     : True
[023] sa.unlock_system(hostname)    Unlock host specified, monitoring on: True
[024] sa.write_log('message',[,lf=true]) Write msg to Screen,Log or Both    : message
[025] sa.write_err('message',[,lf=true]) Write message to Log & Error log    : message
[026] sa.sendmail(mail,sub,body,att) sadm_sendmail(email,"subject","body","file1,file2")
[027] sa.show_version(pver)          Used -v cmdline to show script info : Ver.+Desc.+LibrVer
[028] sa.sleep(60,15)                Sleep 60 sec & update every 15 sec. : 60...45...30...15...0
[029] sa.trimfile(filename,nlines=500) Keep last 500 lines of filename.    : 0=Success 1=Error

```

FUNCTIONS AVAILABLE ONLY PYTHON	Description	This System Result
[001] sa.db_connect('sadmin')	Open connection to database	: 1=Success 1=Error
[002] sa.db_close():	Close connection to database	: 0=Success, 1=Error
[003] sa.db_silent	If DBError, No ErrMsg(Return Error#): False	

```
[004] sa.db_used           Need to access SADMIN Database ?    : True
[005] sa.silentremove('file') Silent file delete (no msg, no err) : 0
[006] sa.touch_file('filename') Create an empty file           : 0=File created 1=Error
```

Overview of the 'sa.start()' and 'sa.stop()' functions

Function 'sa.start(pver,pdesc)'

- 'pver' variable in SADMIN section, indicating the program version.
- 'pdesc' variable in SADMIN section, is a short description of the program.

What this function does:

- 1) Make sure all \$SADMIN directories & sub-dir. exist and have proper permissions.
- 2) Make sure log files exist with proper permission.
- 3) Write the log header (if 'sa.log_header = True').
- 4) If script run on the SADMIN server, check if system is lock
- 5) Check if PID file exist, show error message and abort.
Unless user allow to run simultaneously more than one copy (sa.multiple_exec=True).
- 6) Record the start Date/Time.
- 7) Add line in the [R]eturn [C]ode [H]istory file stating script is started (Code 2).

Function 'sa.stop(pexit_code)'

- 'pexit_code' variable defined in SADMIN section, indicate the program exit code.

This should be the last function called at the end of your script.

It accept one parameter - Either 0 (Successful) or non-zero (Error Encountered).

Example : sa.stop(pexit_code) # Close SADMIN Environment

What this function does:

- 1) Get actual time and calculate the execution time.
- 2) It check if the exit code is not zero, change it to 1.
- 3) If 'sa.log_footer = True', write the log footer.
- 4) If 'sa.use_rch = True', append (Start/End/Elapse Time ...) in the RCH File.

- 5) Trim The RCH File according to user choice in 'sa.sadm_max_rchline'.
No trim is done if 'sa.sadm_max_rchline = 0'.
- 6) Trim the log according to user choice in 'sa.sadm_max_logline'.
No trim is done if 'sa.sadm_max_logline = 0'.
- 7) Delete the PID file of the script (sa.pid_file) if it exist.

SADMIN CONFIG FILE VARIABLES	Description	This System Result
[001] sa.sadm_server	SADMIN server name (FQDN)	: sherlock.maison.ca
[002] sa.sadm_host_type	SADMIN [C]lient or [S]erver	: S
[003] sa.sadm_mail_addr	SADMIN Administrator Default Email	: brucetalbot95@gmail.com
[004] sa.sadm_alert_type	0=NoMail 1=OnError 3=OnSuccess 4=All:	1
[005] sa.sadm_alert_group	Default Alert Group	: default
[006] sa.sadm_alert_repeat	Seconds to wait before repeat alert	: 0
[007] sa.sadm_days_history	Days to keep alert in History file	: 14
[008] sa.sadm_days_archive	Days to keep in alert Archive file	: 365
[009] sa.sadm_textbelt_key	TextBelt.com API Key	: *Hidden*
[010] sa.sadm_textbelt_url	TextBelt.com API URL	: https://textbelt.com/text
[011] sa.sadm_cie_name	Your Company name	: Your Cie Name
[012] sa.sadm_domain	Server creation default domain	: maison.ca
[013] sa.sadm_user	SADMIN User Name	: sadmin
[014] sa.sadm_group	SADMIN Group Name	: sadmin
[015] sa.sadm_www_user	User that Run Apache Web Server	: apache
[016] sa.sadm_www_group	Group that Run Apache Web Server	: apache
[017] sa.sadm_dbname	SADMIN Database Name	: sadmin
[018] sa.sadm_dbhost	SADMIN Database Host	: localhost
[019] sa.sadm_dbport	SADMIN Database Host TCP Port	: 3306
[020] sa.sadm_rw_dbuser	SADMIN Database Read/Write User	: sadmin
[021] sa.sadm_rw_dbpwd	SADMIN Database Read/Write User Pwd	: *Hidden*
[022] sa.sadm_ro_dbuser	SADMIN Database Read Only User	: squery
[023] sa.sadm_ro_dbpwd	SADMIN Database Read Only User Pwd	: *Hidden*
[024] sa.sadm_smtp_server	Your internet smtp server	: smtp.gmail.com
[025] sa.sadm_smtp_port	Your internet smtp server port	: 587

```

[026] sa.sadm_smtp_sender      Your internet smtp email address      : brucetalbot95@gmail.com
[027] sa.sadm_gmpw              Your internet smtp email password      : *Hidden*
[028] sa.sadm_ssh_port          SSH Port to communicate with client    : 32
[029] sa.sadm_monitor_update_interval  SYSMON web page refresh rate (Sec)    : 60
[030] sa.sadm_monitor_recent_count  SYSMON web page nb. recent scripts    : 10
[031] sa.sadm_monitor_recent_exclude  SYSMON recent scripts excluded        : sadm_nmon_watcher,sadm_fetch_clients
[032] sa.sadm_nmon_keepdays       Nb. of days to keep nmon perf. file   : 10
[033] sa.sadm_rch_keepdays        Nb. days to keep unmodified rch file: 35
[034] sa.sadm_log_keepdays        Nb. days to keep unmodified log file: 35
[035] sa.sadm_max_rchline          Trim rch file to this max. of lines    : 100
[036] sa.sadm_max_logline          Trim log to this maximum of lines     : 500
[037] sa.sadm_network1            Network/Netmask 1 inv. IP/Name/Mac     : 192.168.1.0/24
[038] sa.sadm_network2            Network/Netmask 2 inv. IP/Name/Mac     : None
[039] sa.sadm_network3            Network/Netmask 3 inv. IP/Name/Mac     : None
[040] sa.sadm_network4            Network/Netmask 4 inv. IP/Name/Mac     : None
[041] sa.sadm_network5            Network/Netmask 5 inv. IP/Name/Mac     : None
[042] sa.sadm_rear_nfs_server      ReaR NFS Server IP or Name            : batnas.maison.ca
[043] sa.sadm_rear_nfs_mount_point  ReaR NFS Mount Point                  : /volume1/backup_rear
[044] sa.sadm_rear_backup_to_keep   ReaR NFS Backup - Nb. to keep         : 3
[045] sa.sadm_rear_backup_dif       ReaR alert cur vs prev size differ    : 25 %
[046] sa.sadm_rear_backup_interval  ReaR alert if Backup older than       : 10 days
[047] sa.sadm_backup_nfs_server     NFS Backup IP or Server Name          : batnas.maison.ca
[048] sa.sadm_backup_nfs_mount_point NFS Backup Mount Point                 : /volume1/backup_linux/sadmin_backups
[049] sa.sadm_backup_dif           Backup alert cur vs prev size differ: 40 %
[050] sa.sadm_backup_interval       Backup alert if older than X days     : 7 days
[051] sa.sadm_daily_backup_to_keep  Daily Backup to Keep                  : 2
[052] sa.sadm_weekly_backup_to_keep Weekly Backup to Keep                  : 2
[053] sa.sadm_monthly_backup_to_keep Monthly Backup to Keep                 : 2
[054] sa.sadm_yearly_backup_to_keep Yearly Backup to keep                  : 2
[055] sa.sadm_weekly_backup_day     Weekly Backup Day (1=Mon,7=Sun)       : 5
[056] sa.sadm_monthly_backup_date   Monthly Backup Date (1-28)            : 1
[057] sa.sadm_yearly_backup_month   Yearly Backup Month (1-12)            : 12
[058] sa.sadm_yearly_backup_date    Yearly Backup Date (1-31)             : 31
[059] sa.sadm_pid_timeout          PID file default TimeToLive (Sec)     : 7200
[060] sa.sadm_lock_timeout          Maximun nb. sec. a host can be lock   : 3600
[061] sa.sadm_vm_export_nfs_server  NFS Export Server                     : batnas.maison.ca
[062] sa.sadm_vm_export_mount_point NFS Export Mount Point                 : /volume1/backup_vm/virtualbox_exports

```

```

[063] sa.sadm_vm_export_to_keep      Nb. of export to keep      : 2
[064] sa.sadm_vm_export_interval     Days without export before alert : 14
[065] sa.sadm_vm_export_alert        Issue an alert if interval reached : Y
[066] sa.sadm_vm_user                 User part of 'vboxusers' user group : jacques
[067] sa.sadm_vm_stop_timeout         Max. seconds given for acpi shutdown: 120
[068] sa.sadm_vm_start_interval       Sec. to sleep between each VM start : 30

```

Directories Var. Avail.	Description	This System Result
[001] sa.dir_base	SADMIN Root Directory	: /opt/sadmin
[002] sa.dir_bin	SADMIN Scripts Directory	: /opt/sadmin/bin
[003] sa.dir_tmp	SADMIN Temporary file(s) Directory	: /opt/sadmin/tmp
[004] sa.dir_lib	SADMIN Shell & Python Library Dir.	: /opt/sadmin/lib
[005] sa.dir_log	SADMIN Script Log Directory	: /opt/sadmin/log
[006] sa.dir_cfg	SADMIN Configuration Directory	: /opt/sadmin/cfg
[007] sa.dir_sys	Server Startup/Shutdown Script Dir.	: /opt/sadmin/sys
[008] sa.dir_doc	SADMIN Documentation Directory	: /opt/sadmin/doc
[009] sa.dir_pkg	SADMIN Packages Directory	: /opt/sadmin/pkg
[010] sa.dir_dat	Server Data Directory	: /opt/sadmin/dat
[011] sa.dir_nmon	Server NMON - Data Collected Dir.	: /opt/sadmin/dat/nmon
[012] sa.dir_dr	Server Disaster Recovery Info Dir.	: /opt/sadmin/dat/dr
[013] sa.dir_rch	Server Return Code History Dir.	: /opt/sadmin/dat/rch
[014] sa.dir_net	Server Network Information Dir.	: /opt/sadmin/dat/net
[015] sa.dir_rpt	SYStem MONitor Report Directory	: /opt/sadmin/dat/rpt
[016] sa.dir_dbb	Database Backup Directory	: /opt/sadmin/dat/dbb
[017] sa.dir_setup	SADMIN Setup Directory.	: /opt/sadmin/setup
[018] sa.dir_usr	User/System specific directory	: /opt/sadmin/usr
[019] sa.dir_usr_bin	User/System specific bin/script Dir.	: /opt/sadmin/usr/bin
[020] sa.dir_usr_lib	User/System specific library Dir.	: /opt/sadmin/usr/lib
[021] sa.dir_usr_doc	User/System specific documentation	: /opt/sadmin/usr/doc
[022] sa.dir_usr_mon	User/System specific SysMon Scripts	: /opt/sadmin/usr/mon
[023] sa.dir_www	SADMIN Web Site Root Directory	: /opt/sadmin/www
[024] sa.dir_www_doc	SADMIN Web Site Root Directory	: /opt/sadmin/www/doc
[025] sa.dir_www_dat	SADMIN Web Site Systems Data Dir.	: /opt/sadmin/www/dat

```

[026] sa.dir_www_lib          SADMIN Web Site PHP Library Dir.      : /opt/sadmin/www/lib
[027] sa.dir_www_tmp          SADMIN Web Temp Working Directory    : /opt/sadmin/www/tmp
[028] sa.dir_www_perf         Web system performance Graph Dir.    : /opt/sadmin/www/tmp/perf

```

```

-----
SADMIN FILES VARIABLES AVAIL.      Description                                This System Result
-----
[001] sa.pid_file             Current script PID file                  : /opt/sadmin/tmp/sadmlib_std_demo.pid
[002] sa.cfg_file             SADMIN configuration file                : /opt/sadmin/cfg/sadmin.cfg
[003] sa.cfg_hidden           SADMIN configuration template           : /opt/sadmin/cfg/.sadmin.cfg
[004] sa.alert_file            Alert group definition file              : /opt/sadmin/cfg/alert_group.cfg
[005] sa.alert_init            Alert group template file                : /opt/sadmin/cfg/.alert_group.cfg
[006] sa.alert_hist             Alert History file                       : /opt/sadmin/cfg/alert_history.txt
[007] sa.alert_hini            Alert History template file              : /opt/sadmin/cfg/.alert_history.txt
[008] sa.tmp_file1              User usable Temp Work File 1            : /opt/sadmin/tmp/sadmlib_std_demo_1.2733865
[009] sa.tmp_file2              User usable Temp Work File 2            : /opt/sadmin/tmp/sadmlib_std_demo_2.2733865
[010] sa.tmp_file3              User usable Temp Work File 3            : /opt/sadmin/tmp/sadmlib_std_demo_3.2733865
[011] sa.log_file               Script Log File                          : /opt/sadmin/log/sherlock_sadmlib_std_demo.log
[012] sa.rch_file               Script Return Code History File          : /opt/sadmin/dat/rch/sherlock_sadmlib_std_demo.rch
[013] sa.dbpass_file            SADMIN Database User Password File      : /opt/sadmin/cfg/.dbpass
[014] sa.rpt_file               [SYS]tem [MON]itor report file          : /opt/sadmin/dat/rpt/sherlock.rpt
[015] sa.backup_list            Backup list file name                    : /opt/sadmin/cfg/backup_list.txt
[016] sa.backup_list_init       Backup list template file                : /opt/sadmin/cfg/.backup_list.txt
[017] sa.backup_exclude        Backup exclude list file name            : /opt/sadmin/cfg/backup_exclude.txt
[018] sa.backup_exclude_init    Backup exclude template file             : /opt/sadmin/cfg/.backup_exclude.txt

```

```

-----
COMMAND PATH USE BY SADMIN STD. LIBR.  Description                                This System Result
-----
[001] sa.cmd_dmidcode         Cmd. 'dmidecode', Get model & type       : /usr/sbin/dmidecode
[002] sa.cmd_bc                Cmd. 'bc', Do some Math.                 : /usr/bin/bc
[003] sa.cmd_fdisk             Cmd. 'fdisk', Get Partition Info         : /usr/sbin/fdisk
[004] sa.cmd_which              Cmd. 'which', Get Command location       : /usr/bin/which

```

```

[005] sa.cmd_locate          Cmd. 'locate', Get Command location : /usr/bin/locate
[006] sa.cmd_perl            Cmd. 'perl', epoch time Calc.      : /usr/bin/perl
[007] sa.cmd_mutt            Cmd. 'mutt', Used to Send Email      : /usr/bin/mutt
[008] sa.cmd_curl            Cmd. 'curl', To send alert to Slack : /usr/bin/curl
[009] sa.cmd_lscpu           Cmd. 'lscpu', Socket & thread info : /usr/bin/lscpu
[010] sa.cmd_nmon            Cmd. 'nmon', Collect Perf Statistic : /usr/bin/nmon
[011] sa.cmd_parted          Cmd. 'parted', Get Disk Real Size   : /usr/sbin/parted
[012] sa.cmd_ethtool         Cmd. 'ethtool', Get System IP Info  : /usr/sbin/ethtool
[013] sa.cmd_ssh             Cmd. 'ssh', SSH to SADMIN client    : /usr/bin/ssh
[014] sa.cmd_ssh_full       Cmd. 'ssh', SSH to connect to client: /usr/bin/ssh -qnp 32 -o ConnectTimeout=2 -o
ConnectionAttempts=2
[015] sa.cmd_rrdtool         Cmd. 'rrdtool' to produce graph     : /usr/bin/rrdtool
[016] sa.cmd_lsb_release     Cmd. 'lsb_release' to get dist. info: /usr/bin/lsb_release
[017] sa.cmd_inxi            Cmd. 'inxi' binary location        : /usr/bin/inxi

```

Database Information	Description	This System Result
[001] sa.db_silent	True=No db_errmsg (Just db_errno)	: False
[002] sa.db_used	Script using Database ?	: True

```

=====
Script exit code is 0 (Success) and execution time is 00:00:00
Send an alert only when it terminate with error.
Trim log file /opt/sadmin/log/sherlock_sadmlib_std_demo.log to 500 lines.
Thu 09 May 2024 20:43:07 - End of sadmlib_std_demo.py
=====

```

```

root@sherlock: /home/jacques/Documents/gitrepos/sadmin/bin #

```