```
=====================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
User Var. that affect SADMIN behavior  Description                        This System Result
=====================================================================================
[001] $SADM_VER                        Script Version Number              : 3.7
[002] $SADM_PN                         Script Name                        : sadmlib_std_demo.sh
[003] $SADM_INST                       Script Name Without Extension      : sadmlib_std_demo
[004] $SADM_USERNAME                    Current User Name                  : root
[005] $SADM_TPID                        Current Process ID                 : 31387
[006] $SADM_MULTIPLE_EXEC               Allow running multiple copy        : Y
[007] $SADM_USE_RCH                     Gen. entry in .rch file            : N
[008] $SADM_LOG_TYPE                    Set Output to [S]creen [L]og [B]oth : B
[009] $SADM_LOG_APPEND                  Append Log or Create New One       : N
[010] $SADM_LOG_HEADER                  Generate Header in log             : N
[011] $SADM_LOG_FOOTER                  Generate or not Footer in log      : N
[012] $SADM_EXIT_CODE                   Script Exit Return Code            : 0


=====================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
Calling Functions                      Description                        This System Result
=====================================================================================
[001] $(sadm_get_release)              SADMIN Release Number (XX.XX)      : 0.94.0
[002] $(sadm_get_ostype)               OS Type (Uppercase,LINUX,AIX,DARWIN): LINUX
[003] $(sadm_get_osversion)            Return O/S Version (Ex: 7.2, 6.5)  : 7.6.1810
[004] $(sadm_get_osmajorversion)       Return O/S Major Version (Ex 7, 6) : 7
[005] $(sadm_get_osminorversion)       Return O/S Minor Version (Ex 2, 3) : 6
[006] $(sadm_get_osname)               O/S Name (REDHAT,CENTOS,UBUNTU,...) : CENTOS
[007] $(sadm_get_oscodename)           O/S Project Code Name              : Core
[008] $(sadm_get_kernel_version)       O/S Running Kernel Version         : 3.10.0-957.1.3.el7.x86_64
[009] $(sadm_get_kernel_bitmode)       O/S Kernel Bit Mode (32 or 64)     : 64
[010] $(sadm_get_hostname)             Current Host Name                  : holmes
[011] $(sadm_get_host_ip)              Current Host IP Address            : 192.168.1.12
[012] $(sadm_get_domainname)           Current Host Domain Name           : maison.ca
[013] $(sadm_get_fqdn)                 Fully Qualified Domain Host Name    : holmes.maison.ca
[014] $(sadm_get_epoch_time)           Get Current Epoch Time             : 1547923508
[015] $(sadm_epoch_to_date 1547923508) Convert epoch time to date         : 2019.01.19 13:45:08
      WDATE='2019.01.19 13:45:08'
[016] $(sadm_date_to_epoch "$WDATE")   Convert Date to epoch time         : 1547923508
      DATE1='2016.01.30 10:00:44'
      DATE2='2016.01.30 10:00:03'
[017] $(sadm_elapse "$DATE1" "$DATE2") Elapse Time between two timestamps  : 00:00:41


=====================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
SADMIN BASH SHELL SPECIFIC FUNCTIONS   Description                        This System Result
=====================================================================================
[001] $(sadm_server_type)              Host is Physical or Virtual (P/V)  : P
[002] $(sadm_server_model)             Server model (Ex: HP ProLiant DL580): OptiPlex 7020
```

```
[003] $(sadm_server_serial)          Server serial number (Ex: 4S7GYF1) : BJSV942
[004] $(sadm_server_memory)          Server total memory in MB (Ex: 3790): 7730
[005] $(sadm_server_hardware_bitmode) CPU Hardware capable of 32/64 bits  : 64
[006] $(sadm_server_nb_logical_cpu)  Number of Logical CPU on server     : 4
[007] $(sadm_server_nb_cpu)          Number of Physical CPU on server    : 1
[008] $(sadm_server_nb_socket)       Number of socket on server          : 1
[009] $(sadm_server_core_per_socket) Number of Core per Socket           : 4
[010] $(sadm_server_thread_per_core) Number of Thread per Core           : 1
[011] $(sadm_server_cpu_speed)       Server CPU Speed in MHz             : 3366
[012] $(sadm_server_disks)           Disks list(MB) (DISKNAME|SIZE,...)  : sda|512000,sdb|1024000
[013] $(sadm_server_vg)              VG list(MB) (VGNAME|SIZE|USED|FREE) : rootvg|476426|397230|79196
[014] $(sadm_server_ips)             Network IP(Name|IP|Netmask|MAC)     : em1|192.168.1.12|255.255.255.0|98:90:96:b7:64:a2,em1:1|
192.168.1.20|255.255.255.0|98:90:96:b7:64:a2,em1:2|192.168.1.68|255.255.255.0|98:90:96:b7:64:a2,em1:3|192.168.1.13|255.255.255.0|
98:90:96:b7:64:a2,em1:4|192.168.1.6|255.255.255.0|98:90:96:b7:64:a2,em1:5|192.168.1.23|255.255.255.0|98:90:96:b7:64:a2,em1:6|
192.168.1.126|255.255.255.0|98:90:96:b7:64:a2,em1:7|192.168.1.28|255.255.255.0|98:90:96:b7:64:a2,em1:8|192.168.1.29|255.255.255.0|
98:90:96:b7:64:a2
[015] sadm_toupper string            Return string uppercase             : STRING
[016] sadm_tolower STRING            Return string lowercase             : string


================================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
Overview of sadm_start and sadm_stop function
================================================================================================
Example of utilisation:

 # sadm_start                                  # Init Env Dir & RC/Log File
 # if [ $? -ne 0 ] ; then sadm_stop 1 ; exit 1 ;fi    # Exit if Problem
 # main_process                                # Main Process
 # SADM_EXIT_CODE=$?                           # Save Error Code
 # sadm_stop $SADM_EXIT_CODE                   # Close SADM Tool & Upd RCH
 # exit $SADM_EXIT_CODE                        # Exit With Global Err (0/1)

sadm_start
    Start and initialize sadm environment - Accept no Parameter
    If SADMIN root directory is not /sadmin, make sure the SADMIN Env. variable is set to proper dir.
    Please call this function when your script is starting
    What this function will do for us :
        1) Make sure all directories & sub-directories exist and have proper permissions.
        2) Make sure log file exist with proper permission (/sadmin/log/holmes_sadmlib_std_demo.log)
        3) Make sure Return Code History (.rch) exist and have the right permission
        4) If PID file exist, show error message and abort.
           Unless user allow more than one copy to run simultaniously (SADM_MULTIPLE_EXEC='Y')
        5) Add line in the [R]eturn [C]ode [H]istory file stating script is started (Code 2)
        6) Write HostName - Script name and version - O/S Name and version to the Log file (SADM_LOG)

sadm_stop
    Accept one parameter - Either 0 (Successfull) or non-zero (Error Encountered)
    Please call this function just before your script end
    What this function do.
```

```
     1) If Exit Code is not zero, change it to 1.
     2) Get Actual Time and Calculate the Execution Time.
     3) Writing the Script Footer in the Log (Script Return code, Execution Time, ...)
     4) Update the RCH File (Start/End/Elapse Time and the Result Code)
     5) Trim The RCH File Based on User choice in sadmin.cfg
     6) Write to Log the user mail alerting type choose by user (sadmin.cfg)
     7) Trim the Log based on user selection in sadmin.cfg
     8) Send Email to sysadmin (if user selected that option in sadmin.cfg)
     9) Delete the PID File of the script (SADM_PID_FILE)
    10) Delete the User 3 TMP Files (SADM_TMP_FILE1, SADM_TMP_FILE2, SADM_TMP_FILE3)



===================================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
SADMIN CONFIG FILE VARIABLES          Description                        This System Result
===================================================================================================
[001] $SADM_SERVER                    SADMIN SERVER NAME (FQDN)          : holmes.maison.ca
[002] $SADM_HOST_TYPE                  SADMIN [C]lient or [S]erver        : S
[003] $SADM_MAIL_ADDR                  SADMIN Administrator Default Email : duplessis.jacques@gmail.com
[004] $SADM_ALERT_TYPE                 0=NoMail 1=OnError 2=OnSuccess 3=All: 1
[005] $SADM_ALERT_GROUP                Default Alert Group                : default
[006] $SADM_CIE_NAME                   Your Company Name                  : Your Cie Name
[007] $SADM_DOMAIN                     Server Creation Default Domain     : maison.ca
[008] $SADM_USER                       SADMIN User Name                   : sadmin
[009] $SADM_GROUP                      SADMIN Group Name                  : sadmin
[010] $SADM_WWW_USER                   User that Run Apache Web Server     : apache
[011] $SADM_WWW_GROUP                  Group that Run Apache Web Server    : apache
[012] $SADM_DBNAME                     SADMIN Database Name               : sadmin
[013] $SADM_DBHOST                     SADMIN Database Host               : sadmin.maison.ca
[014] $SADM_DBPORT                     SADMIN Database Host TCP Port      : 3306
[015] $SADM_RW_DBUSER                  SADMIN Database Read/Write User    : sadmin
[016] $SADM_RW_DBPWD                   SADMIN Database Read/Write User Pwd : Nimdas17!
[017] $SADM_RO_DBUSER                  SADMIN Database Read Only User     : squery
[018] $SADM_RO_DBPWD                   SADMIN Database Read Only User Pwd : Query18!
[019] $SADM_RRDTOOL                    RRDTOOL Binary Location            : /bin/rrdtool
[020] $SADM_SSH_PORT                   SSH Port to communicate with client : 32
[021] $SADM_NMON_KEEPDAYS              Nb. of days to keep nmon perf. file : 40
[022] $SADM_RCH_KEEPDAYS               Nb. days to keep unmodified rch file: 35
[023] $SADM_LOG_KEEPDAYS               Nb. days to keep unmodified log file: 35
[024] $SADM_MAX_RCLINE                 Trim rch file to this max. of lines : 125
[025] $SADM_MAX_LOGLINE                Trim log to this maximum of lines  : 2000
[026] $SADM_NETWORK1                   Network/Netmask 1 inv. IP/Name/Mac : 192.168.1.0/24
[027] $SADM_NETWORK2                   Network/Netmask 2 inv. IP/Name/Mac :
[028] $SADM_NETWORK3                   Network/Netmask 3 inv. IP/Name/Mac :
[029] $SADM_NETWORK4                   Network/Netmask 4 inv. IP/Name/Mac :
[030] $SADM_NETWORK5                   Network/Netmask 5 inv. IP/Name/Mac :
[031] $SADM_MKSYSB_NFS_SERVER          AIX MKSYSB NFS Server IP or Name   : batnfs.maison.ca
[032] $SADM_MKSYSB_NFS_MOUNT_POINT     AIX MKSYSB NFS Mount Point         : /volume1/mksysb
```

```
[033] $SADM_MKSYSB_BACKUP_TO_KEEP     AIX MKSYSB NFS Backup - Nb. to keep : 2
[034] $SADM_REAR_NFS_SERVER           Rear NFS Server IP or Name          : batnas.maison.ca
[035] $SADM_REAR_NFS_MOUNT_POINT      Rear NFS Mount Point                : /volume1/Linux_DR
[036] $SADM_REAR_BACKUP_TO_KEEP       Rear NFS Backup - Nb. to keep       : 3
[037] $SADM_BACKUP_NFS_SERVER         NFS Backup IP or Server Name        : batnas.maison.ca
[038] $SADM_BACKUP_NFS_MOUNT_POINT    NFS Backup Mount Point              : /volume1/backup_linux
[039] $SADM_DAILY_BACKUP_TO_KEEP      Nb. of Daily Backup to keep         : 4
[040] $SADM_WEEKLY_BACKUP_TO_KEEP     Nb. of Weekly Backup to keep        : 4
[041] $SADM_MONTHLY_BACKUP_TO_KEEP    Nb. of Monthly Backup to keep       : 4
[042] $SADM_YEARLY_BACKUP_TO_KEEP     Nb. of Yearly Backup to keep        : 2
[043] $SADM_WEEKLY_BACKUP_DAY         Weekly Backup Day (1=Mon,...,7=Sun) : 5
[044] $SADM_MONTHLY_BACKUP_DATE       Monthly Backup Date (1-28)          : 1
[045] $SADM_YEARLY_BACKUP_MONTH       Month to take Yearly Backup (1-12)  : 12
[046] $SADM_YEARLY_BACKUP_DATE        Date to do Yearly Backup(1-DayInMth): 31
[047] $SADM_STORIX_NFS_SERVER         Storix NFS Server IP or Name        : batnas.maison.ca
[048] $SADM_STORIX_NFS_MOUNT_POINT    Storix NFS Mount Point              : /volume1/storix
[049] $SADM_STORIX_BACKUP_TO_KEEP     Storix NFS Backup - Nb. to Keep     : 3


===========================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
Client Directories Var. Avail.        Description                     This System Result
===========================================================================================
[001] $SADM_BASE_DIR                  SADMIN Root Directory               : /sadmin
[002] $SADM_BIN_DIR                   SADMIN Scripts Directory            : /sadmin/bin
[003] $SADM_TMP_DIR                   SADMIN Temporary file(s) Directory  : /sadmin/tmp
[004] $SADM_LIB_DIR                   SADMIN Shell & Python Library Dir.  : /sadmin/lib
[005] $SADM_LOG_DIR                   SADMIN Script Log Directory         : /sadmin/log
[006] $SADM_CFG_DIR                   SADMIN Configuration Directory      : /sadmin/cfg
[007] $SADM_SYS_DIR                   Server Startup/Shutdown Script Dir. : /sadmin/sys
[008] $SADM_DOC_DIR                   SADMIN Documentation Directory      : /sadmin/doc
[009] $SADM_PKG_DIR                   SADMIN Packages Directory           : /sadmin/pkg
[010] $SADM_DAT_DIR                   Server Data Directory               : /sadmin/dat
[011] $SADM_NMON_DIR                  Server NMON - Data Collected Dir.   : /sadmin/dat/nmon
[012] $SADM_DR_DIR                    Server Disaster Recovery Info Dir.  : /sadmin/dat/dr
[013] $SADM_RCH_DIR                   Server Return Code History Dir.     : /sadmin/dat/rch
[014] $SADM_NET_DIR                   Server Network Info Dir.            : /sadmin/dat/net
[015] $SADM_RPT_DIR                   SYStem MONitor Report Directory     : /sadmin/dat/rpt
[016] $SADM_DBB_DIR                   Database Backup Directory           : /sadmin/dat/dbb
[017] $SADM_SETUP_DIR                 SADMIN Installation/Update Dir.     : /sadmin/setup
[018] $SADM_USR_DIR                   User/System specific directory      : /sadmin/usr
[019] $SADM_UBIN_DIR                  User/System specific bin/script Dir.: /sadmin/usr/bin
[020] $SADM_ULIB_DIR                  User/System specific library Dir.   : /sadmin/usr/lib
[021] $SADM_UDOC_DIR                  User/System specific documentation  : /sadmin/usr/doc
[022] $SADM_UMON_DIR                  User/System specific SysMon Scripts : /sadmin/usr/mon


===========================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
Server Directories Var. Avail.        Description                     This System Result
```

```
=====================================================================================
[001] $SADM_WWW_DIR              SADMIN Web Site Root Directory   : /sadmin/www
[002] $SADM_WWW_DOC_DIR          SADMIN Web Documentation Dir.    : /sadmin/www/doc
[003] $SADM_WWW_DAT_DIR          SADMIN Web Site Systems Data Dir. : /sadmin/www/dat
[004] $SADM_WWW_LIB_DIR          SADMIN Web Site PHP Library Dir.  : /sadmin/www/lib
[005] $SADM_WWW_TMP_DIR          SADMIN Web Temp Working Directory : /sadmin/www/tmp
[006] $SADM_WWW_PERF_DIR         SADMIN Web Performance Graph Dir.  : /sadmin/www/tmp/perf


=====================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
SADMIN FILES VARIABLES AVAIL.      Description                      This System Result
=====================================================================================
[001] $SADM_PID_FILE             Current script PID file          : /sadmin/tmp/sadmlib_std_demo.pid
[002] $SADM_CFG_FILE             SADMIN Configuration File        : /sadmin/cfg/sadmin.cfg
[003] $SADM_CFG_HIDDEN           SADMIN Initial Configuration File : /sadmin/cfg/.sadmin.cfg
[004] $SADM_ALERT_FILE           SADMIN Alert Group File          : /sadmin/cfg/alert_group.cfg
[005] $SADM_ALERT_INIT           SADMIN Initial Alert Group File  : /sadmin/cfg/.alert_group.cfg
[006] $SADM_SLACK_FILE           SADMIN Slack Channel WebHook File : /sadmin/cfg/alert_slack.cfg
[007] $SADM_SLACK_INIT           SADMIN Initial Slack WebHook File : /sadmin/cfg/.alert_slack.cfg
[008] $SADM_ALERT_HIST           SADMIN Alert History File        : /sadmin/cfg/alert_history.txt
[009] $SADM_ALERT_HINI           SADMIN Initial Alert History File : /sadmin/cfg/.alert_history.txt
[010] $SADM_ALERT_SEQ            SADMIN Alert Reference Number File : /sadmin/cfg/alert_history.seq
[011] $SADM_TMP_FILE1            User usable Temp Work File 1     : /sadmin/tmp/sadmlib_std_demo_1.31387
[012] $SADM_TMP_FILE2            User usable Temp Work File 2     : /sadmin/tmp/sadmlib_std_demo_2.31387
[013] $SADM_TMP_FILE3            User usable Temp Work File 3     : /sadmin/tmp/sadmlib_std_demo_3.31387
[014] $SADM_LOG                  Script Log File                  : /sadmin/log/holmes_sadmlib_std_demo.log
[015] $SADM_RCHLOG               Script Return Code History File  : /sadmin/dat/rch/holmes_sadmlib_std_demo.rch
[016] $DBPASSFILE                SADMIN Database User Password File : /sadmin/cfg/.dbpass
[017] $SADM_RPT_FILE             SYStem MONitor Report File       : /sadmin/dat/rpt/holmes.rpt
[018] $SADM_BACKUP_LIST          Backup List File Name            : /sadmin/cfg/backup_list.txt
[019] $SADM_BACKUP_LIST_INIT     Initial Backup List (Template)   : /sadmin/cfg/.backup_list.txt
[020] $SADM_BACKUP_EXCLUDE       Backup Exclude List File Name    : /sadmin/cfg/backup_exclude.txt
[021] $SADM_BACKUP_EXCLUDE_INIT  Initial Backup Exclude (Template) : /sadmin/cfg/.backup_exclude.txt


=====================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
COMMAND PATH USE BY SADMIN STD. LIBR.  Description                 This System Result
=====================================================================================
[001] $SADM_LSB_RELEASE          Cmd. 'lsb_release', Get O/S Version : /bin/lsb_release
[002] $SADM_DMIDECODE            Cmd. 'dmidecode', Get model & type : /sbin/dmidecode
[003] $SADM_FACTER               Cmd. 'facter', Get System Info   : /bin/facter
[004] $SADM_BC                   Cmd. 'bc', Do some Math.         : /bin/bc
[005] $SADM_FDISK                Cmd. 'fdisk', Get Partition Info : /sbin/fdisk
[006] $SADM_WHICH                Cmd. 'which', Get Command location : /bin/which
[007] $SADM_PERL                 Cmd. 'perl', epoch time Calc.    : /bin/perl
[008] $SADM_MAIL                 Cmd. 'mail', Send SysAdmin Email : /bin/mail
[009] $SADM_MUTT                 Cmd. 'mutt', Used to Send Email  : /bin/mutt
[010] $SADM_CURL                 Used to send alert to Slack      : /bin/curl
```

```
[011] $SADM_LSCPU                      Cmd. 'lscpu', Socket & thread info  : /bin/lscpu
[012] $SADM_NMON                       Cmd. 'nmon', Collect Perf Statistic : /bin/nmon
[013] $SADM_PARTED                     Cmd. 'parted', Get Disk Real Size    : /sbin/parted
[014] $SADM_ETHTOOL                    Cmd. 'ethtool', Get System IP Info  : /sbin/ethtool
[015] $SADM_SSH                        Cmd. 'ssh', SSH to SADMIN client     : /bin/ssh
[016] $SADM_SSH_CMD                    Cmd. 'ssh', SSH to Connect to client: /bin/ssh -qnp32


==================================================================================================
sadmlib_std_demo.sh v3.7 - Library v2.59
Database Information            Description                        This System Result
==================================================================================================

Show SADMIN Tables:
server
server_category
server_group
server_network


Show Category Table Content:
2    Legacy     Legacy Unsupported Server  1   2017-11-07 00:00:00 0
3    Dev        Development Environment    1   2017-11-07 00:00:00 1
5    Poc        Proof Of Concept env.      1   2017-11-07 00:00:00 0
6    Prod       Production Environment     1   2017-11-07 00:00:00 0
11   Temporary  Temporary Server           1   2017-12-06 11:23:26 0


Show Group Table Content:
2    Cluster    Clustered Server       1   2017-11-22 11:55:50 0
3    Service    Infrastructure Service 1   2017-11-07 00:00:00 0
4    Retired    Server not in use      1   2017-11-07 00:00:00 0
5    Raspberry  Raspberry Pi           1   2017-11-07 00:00:00 0
6    Regular    Normal App. Server     1   2017-11-23 12:33:43 1
7    Temporary  Temporaly in service   1   2017-11-07 00:00:00 0
8    Laptop     Linux Laptop           1   2017-11-07 00:00:00 0


Show Server Table Content:
aixb50     Aix 5.3 Dev. Server      aix       5.3
batman     Aix 7.1 NIM Server       aix       7.1
centos6    CentOS 6 Server          centos    6.10
centos7    CentOS 7 Server          centos    7.6.1810
debian7    Debian V7 Server         debian    7.11
debian8    Debian V8 Server         debian    8.11
gandalf    CentOS V5 Server         centos    5.11
gotham     CentOS V6 Server         centos    6.10
puppet     Puppet Master/Foreman    centos    6.10
raspi0     Raspberry Zero W Rev.1.1 raspbian  8.0
raspi1     Raspberry Pi V1 B+       raspbian  9.6
```

```
raspi2       Raspberry Pi V1 B        raspbian     9.6
raspi4       Raspberry Pi V3 B        raspbian     8.0
raspi3       Raspberry Pi V2 B        raspbian     9.6
Ubuntu1404   Ubuntu 14.04 Server      ubuntu       14.04
ubuntu1604   Ubuntu 16.04 Server      ubuntu       16.04
yoda         Laptop Ubuntu 16.04      ubuntu       16.04
raspi5       Raspberry Pi V3 B+       raspbian     9.6
imac         imac system             macosx       10.13.6
```