```
/sadmin/bin# date
Tue Sep 25 11:35:17 EDT 2018

/sadmin/bin# sadmlib_std_demo.sh
==================================================================================
sadmlib_std_demo.sh v3.6 - Library v2.40
User Var. that affect SADMIN behavior  Description                    This System Result
==================================================================================
[001] $SADM_VER                        Script Version Number          : 3.6
[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             : 6508
[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
[013] $SADM_ALERT_TYPE                 0=No 1=OnError 2=OnSuccess 3=Allways: 1
[014] $SADM_ALERT_GROUP                Alert Group (alert_group.cfg)  : default
[015] $SADM_MAIL_ADDR                  SysAdmin Email                 : duplessis.jacques@gmail.com


==================================================================================
sadmlib_std_demo.sh v3.6 - Library v2.40
Calling Functions                      Description                    This System Result
==================================================================================
[001] $(sadm_get_release)              SADMIN Release Number (XX.XX)  : 0.89
[002] $(sadm_get_ostype)               OS Type (Uppercase,LINUX,AIX,DARWIN): LINUX
[003] $(sadm_get_osversion)            Return O/S Version (Ex: 7.2, 6.5)  : 7.5.1804
[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) : 5
[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     : 3.10.0-862.11.6.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         : 1537889661
[015] $(sadm_epoch_to_date 1537889661) Convert epoch time to date     : 2018.09.25 11:34:21
      WDATE='2018.09.25 11:34:21'
[016] $(sadm_date_to_epoch "$WDATE")   Convert Date to epoch time     : 1537889661
      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 v3.6 - Library v2.40
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            : 3461
[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|377170|99256
[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
[015] sadm_toupper string               Return string uppercase            : STRING
[016] sadm_tolower STRING               Return string lowercase            : string


===============================================================================================
sadmlib_std_demo.sh v3.6 - Library v2.40
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 v3.6 - Library v2.40
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 : 60
[022] $SADM_RCH_KEEPDAYS         Nb. days to keep unmodified rch file: 60
[023] $SADM_LOG_KEEPDAYS         Nb. days to keep unmodified log file: 60
[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         : 3
[040] $SADM_WEEKLY_BACKUP_TO_KEEP    Nb. of Weekly Backup to keep        : 3
[041] $SADM_MONTHLY_BACKUP_TO_KEEP   Nb. of Monthly Backup to keep       : 3
[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 v3.6 - Library v2.40
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 v3.6 - Library v2.40
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 v3.6 - Library v2.40
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_1.6508
[012] $SADM_TMP_FILE2             User usable Temp Work File 2    : /sadmin/tmp/sadmlib_std_demo_2.6508
[013] $SADM_TMP_FILE3             User usable Temp Work File 3    : /sadmin/tmp/sadmlib_std_demo_3.6508
[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


================================================================================
sadmlib_std_demo.sh v3.6 - Library v2.40
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

/sadmin/bin#
```